



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

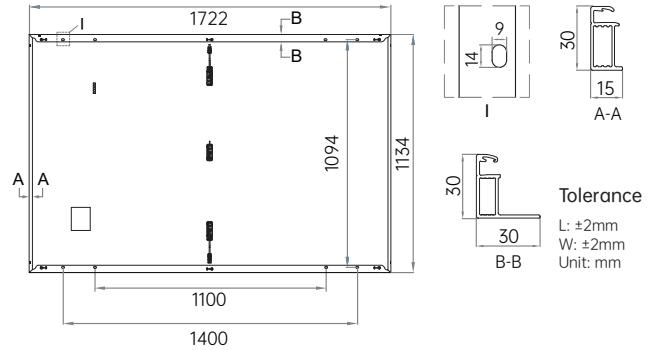
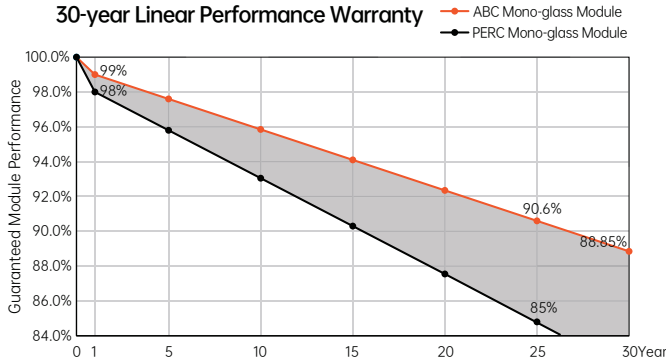
ISO 45001:2018 Occupational Safety and Management System

450W
Output

23.0%
Efficiency

≤1%
First-year Degradation

≤0.35%
Annual Degradation from Year 2-30



Electrical Characteristics (STC: AM1.5 1000W/m² 25°C NOCT: AM1.5 800W/m² 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 |
| Module Efficiency | 22.0% | | 22.3% | | 22.5% | | 22.8% | | 23.0% | |

Mechanical Specification

| | |
|------------------------|--|
| Cell Type | N-Type ABC |
| Front Cover Mono glass | 3.2 mm tempered glass |
| Frame | Black anodized aluminum |
| Cable | 4mm ² (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 |

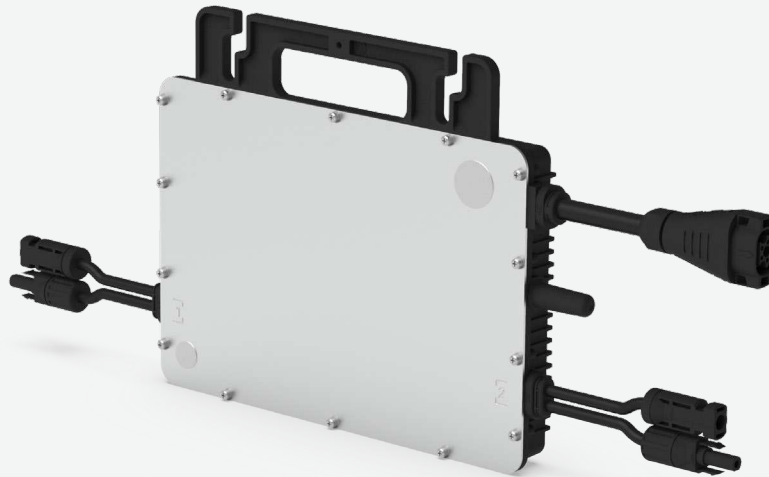
Temperature Ratings (STC)

| | |
|--------------------------------------|-------------|
| 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 |





Microinverter Datasheet

- HMS-600W-2T**
- HMS-700W-2T**
- HMS-800W-2T**
- HMS-900W-2T**
- HMS-1000W-2T**

Description

Hoymiles HMS-1000W series microinverters are specifically designed for mini PV systems, such as balcony systems, and feature an integrated industrial+ grade Wi-Fi module.

With the user-friendly HMS Plug and Play Cable, installation is effortless. Users can connect the microinverter directly to a socket - no complex wiring is required.

The HMS-1000W series microinverters simplify system monitoring. They enable seamless access to real-time production data by directly connecting smartphones to the microinverter. Remote monitoring also made possible through the S-Miles Cloud by creating PV plants.

Features

01 Plug-and-play design for balcony solar systems

02 Built-in industrial+ grade Wi-Fi module for high reliability

03 Compatible with Micro Toolkit or S-Miles Cloud for monitoring and management

04 Output power setting function to customize performance

05 Enhanced safety with rapid shutdown compliance and isolated transformer

06 High-powered microinverter with up to 1000 VA output

Technical Specifications

| Model | HMS-600W-2T | HMS-700W-2T | HMS-800W-2T | HMS-900W-2T | HMS-1000W-2T |
|---|--|-------------|-------------|-------------|--------------|
| Input Data (DC) | | | | | |
| Commonly used module power (W) | 240 to 405+ | 280 to 470+ | 320 to 540+ | 360 to 600+ | 400 to 670+ |
| Maximum input voltage (V) | 60 | 60 | 65 | 65 | 65 |
| MPPT voltage range (V) | 16-60 | | | | |
| Min./Max. start voltage (V) | 22/60 | | | | |
| Maximum input current (A) | 2 × 12 | 2 × 13 | 2 × 14 | 2 × 15 | 2 × 16 |
| Maximum input short circuit current (A) | 2 × 20 | 2 × 20 | 2 × 25 | 2 × 25 | 2 × 25 |
| Number of MPPTs | 2 | | | | |
| Number of inputs per MPPT | 1 | | | | |
| Output Data (AC) | | | | | |
| Rated output power (VA) | 600 | 700 | 800 | 900 | 1000 |
| Rated output current (A) | 2.61 | 3.04 | 3.48 | 3.91 | 4.35 |
| Nominal output voltage/range (V)* | 230/180-275 | | | | |
| Nominal frequency/range (Hz)* | 50/45-55 | | | | |
| Power factor(adjustable) | >0.99 default 0.8 leading ... 0.8 lagging | | | | |
| Total harmonic distortion | < 3% | | | | |
| HMS Plug and Play Cable (Optional) | | | | | |
| Connector type | HMS Field Connector | | | | |
| Cable size | 1.5 mm ² | | | | |
| Cable length | 3 m (Customizable) | | | | |
| Plug type | Schuko | | | | |
| Efficiency | | | | | |
| CEC peak efficiency | 96.70% | 96.70% | 96.70% | 96.50% | 96.50% |
| Nominal MPPT efficiency | 99.80% | | | | |
| Night power consumption (mW) | < 50 | | | | |
| Mechanical Data | | | | | |
| Ambient temperature range (°C) | -40 to +65 | | | | |
| Storage temperature range (°C) | -40 to +85 | | | | |
| Dimensions (W × H × D mm) | 261 × 180 × 35.1 | | | | |
| Weight (kg) | 3.2 | | | | |

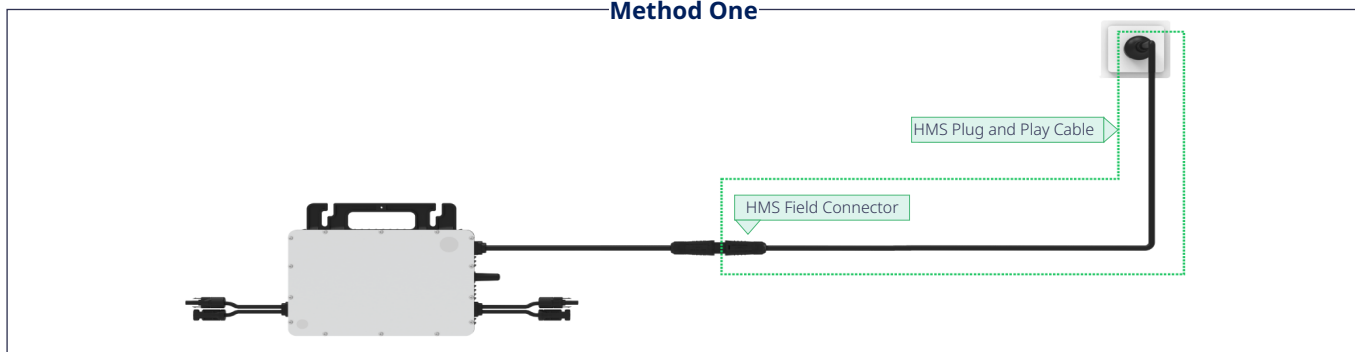
Technical Specifications

| Model | HMS-600W-2T | HMS-700W-2T | HMS-800W-2T | HMS-900W-2T | HMS-1000W-2T |
|------------------|--|-------------|-------------|-------------|--------------|
| Enclosure rating | Outdoor-IP67 | | | | |
| Cooling | Natural convection – No fans | | | | |
| Features | | | | | |
| Communication | Built-in Wi-Fi | | | | |
| Topology | Galvanically Isolated HF Transformer | | | | |
| Monitoring | Micro Toolkit or S-Miles Cloud | | | | |
| Compliance | VDE-AR-N 4105: 2018, EN 50549-1: 2019, VFR 2019, IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4, IEC/EN 61000-3-2/-3 | | | | |

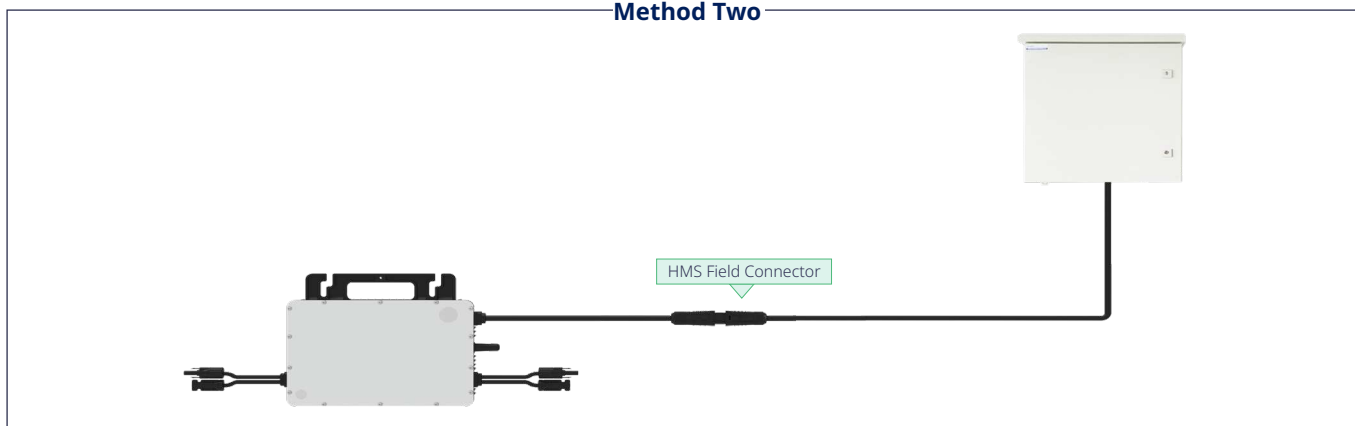
*: Nominal voltage/frequency range may vary based on local requirements.

Wiring Diagram

Method One

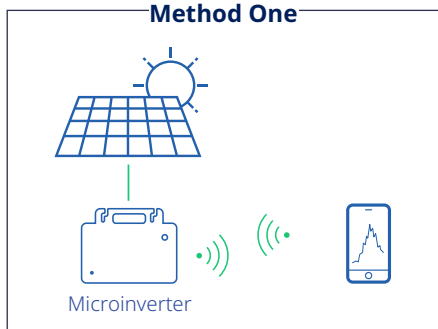


Method Two

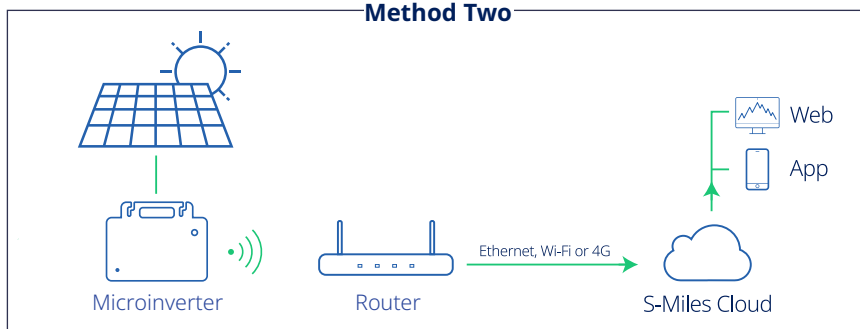


Communication Diagram

Method One



Method Two



EU DECLARATION OF CONFORMITY

(DoC No. 23013002)

We **Hoymiles Power Electronics Inc.**
No.18 Kangjing Road, Hangzhou 310015, Zhejiang Province, P.R. China

as the manufacturer, declare under our sole responsibility that the following products

PRODUCT: **PV Microinverter**
MODELS: **HMS-2000-4T, HMS-1800-4T, HMS-1600-4T**
HMS-2000C-4T, HMS-1800C-4T, HMS-1600C-4T, HMS-1400C-4T
HMS-1000-2T, HMS-900-2T, HMS-800-2T, HMS-700-2T, HMS-600-2T
HMS-500-1T, HMS-450-1T, HMS-400-1T, HMS-350-1T, HMS-300-1T

to which this declaration relates, are in conformity with the following directive and standards:

| Directives | 2014/53/EU (RE Directive) |
|-----------------------|--|
| Article 3.1(b) EMC | EN 301 489-1 V2.2.3 (2019-11) EN 301 489-3 V2.1.1 (2019-03) EN 61000-6-1:2019 EN 61000-6-2:2019 EN 61000-6-3:2021 EN 61000-6-4:2019 EN 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A1:2019+A2:2021 |
| Article 3.1(a) Safety | EN 62109-1:2010 EN 62109-2:2011 |
| Article 3.1(a) Health | EN 62479:2010 EN 50663:2017 |
| Article 3.2 Radio | EN 300 220-1 V3.1.1 (2017-02) EN 300 220-2 V3.1.1 (2017-02) |

Manufacturer: Hoymiles Power Electronics Inc.

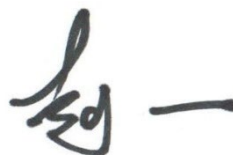
Address: No.18 Kangjing Road, Hangzhou 310015, Zhejiang Province, P.R. China

EU Importer: Hoymiles Power Electronics B.V.

Address: High Tech Campus 9, Unit BK 3.28, 5656 AE Eindhoven, Netherlands

This Declaration of Conformity is not valid any longer, in case, without any written authorization by Hoymiles Power Electronics Inc.:

- The product is modified, supplemented or changed in any other way
- The product is used or installed improperly.

A handwritten signature in black ink, appearing to be "Yi Zhao", positioned above a horizontal line.

Yi Zhao, Vice President.
2023-01-30
Hangzhou, China

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<http://www.hoymiles.com/>

Appendix:

| Product Specifications | |
|------------------------|--------------------------|
| Frequency Range | 863.25 MHz to 869.75 MHz |
| RF Output Power (EIRP) | 11.69 dBm |
| Modulation Type | GFSK |
| Type of Antenna | External Omni Antenna |
| Antenna Gain | 2.0 dBi |