

Product data sheet

Characteristics

AEH-SP01-M1000 and AEH-SP01-M3000

Homaya Pro M1000 and M3000

Solar MPPT 1kW and 3kW



M1000



M3000

Product at glance

The Homaya Pro M1000/M3000 is a PV charge controller with an advanced Maximum Power Point Tracking (MPPT) technology, provides an instant upgrade to the Homaya Pro Solar Off-grid inverters. Offers greater flexibility with modularity, to meet higher energy demand and battery autonomy. Compatible with Lead Acid and Lithium Ferro phosphate technology batteries. Built-in LCD provides real-time monitoring and helps configuration of MPPT charge controller.

Flexible & Scalable

- Maximum Power Point Tracking (MPPT) algorithm harvests the maximum power available from the PV
- Expand the PV array capacity for Homaya Pro Off-grid inverters
- Brand agnostic PV array compatibility
- Compatible with lead acid (Flooded, Gel, AGM) and Lithium Ferro Phosphate batteries
- Advanced multi-stage (bulk, absorption, float) charging technology for diverse applications
- Customizable battery charging profiles for diverse applications

Easy to use

- Intuitive and easy to program LCD screen
- Alerts with alarms for proactive maintenance
- Faceplate buttons for easy configuration

Robust Design

- MPPT charging algorithm with 99% efficiency
- Wide operating temperature range
- Environment friendly

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Device short name	Homaya Pro M1000	Homaya Pro M3000
Electrical specifications		
Nominal battery voltage	24V	48V
Battery voltage operating range	20V – 31.4V	40V – 62.8V
Min. PV operating voltage (Vmp)	30V to 72V	60V to 120V
Max. PV array open circuit voltage (Voc)	80V	130V
Max PV operating voltage	100V	200V
Max. array short-circuit current	48A @ STC	60A @ STC
Max PV array rating	1200 W	3200 W
Max. charge current	45A	60A
Max. output power	1100 W	3000 W
Charger regulation method	Three-stage (bulk, absorption, float)	Three-stage (bulk, absorption, float), Two-Stage (LFP)
Supported battery types	Flooded, GEL, AGM	Flooded, GEL, AGM & LiFePo4
Power consumption (Stand by)	< 3W	< 3W
Efficiency		
Max. power conversion efficiency	95%	95%
Tracking Efficiency	99%	99%
General Specification		
Enclosure material	Sheet metal chassis, Aluminum heat-sink	Sheet metal chassis, Aluminum heat-sink
IP degree of protection	IP 20	IP 20
Product weight	1.6 kg	2.6 kg
Shipping weight	2.1 kg	3.2 kg
Shipping dimensions (H x W x D) in mm	260 x 210 x 150	325 x 235 x 165
Device mounting	Vertical wall mount	Vertical wall mount
Ambient air temperature for operation	-15°C to 40°C (power derating above 25 °C)	-15°C to 40°C (power derating above 25 °C)
Storage temperature range	-25°C to 60°C	-25°C to 60°C
Operation humidity	5% to 95% RH	5% to 95% RH
Part number	AEH-SP01-M1000	AEH-SP01-M3000
Altitude	2000 m	2000 m
Features		
Display type	Graphical LCD	Graphical LCD
Communication ports	RS 485 Port	RS 485 Port / BMS
Cooling	Natural cooling	Forced air, variable speed fan
Regulatory approvals		
Safety	IEC 62109-1, IEC 62109-2	IEC 62109-1, IEC 62109-2
EMI / EMC	IEC 61000	IEC 61000
Certifications**	CE, RoHS, SONCAP	CE, RoHS, SONCAP
Compatible products part numbers		
Homaya Pro	Homaya Pro S3000	Homaya Pro S4000 & S6000

Recommended solar panel size

MPPT Charger Model	Solar Panel		
	60 Cells		72 Cells
	280Wp	290Wp	300Wp
M1000 (1KW)	4 Panels	4 Panels	4 Panels
M3000 (3KW)	12 panels	12 panels	12 panels