

# MN15-12KW-AIO

## ALL IN ONE INVERTER SYSTEM



An 11.4kW inverter featuring three MPPT inputs plus three 120/240vac programmable outputs. The Sol-max AIO inverter employs features not found in other AIO inverters but requested by real world installers. Powerful enough for off-grid use, but also smart enough for modern grid interactive systems.

The AIO's 3 integrated 120/240VAC smartload outputs can be utilized for load shedding, EV charging, or other opportunity loads, and can replace an external programmable distribution box saving you thousands in installation costs.

The AIO's 3 MPPT inputs are capable of utilizing from 90 VDC to the full 600VDC allowed by the NEC. Most All in One inverters only have an MPPT window up to 500VDC.

Dedicated generator and AC coupled PV inputs for maximum flexibility.

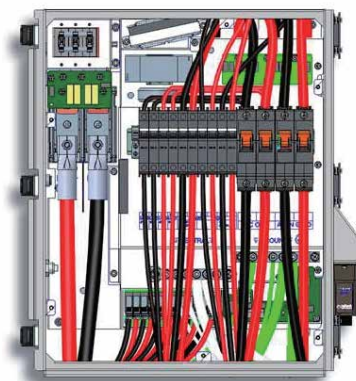
Real time monitoring and control through our app via web or bluetooth allows you to program the inverter and view your systems performance remotely.

Advanced grid interactive ability for simple backup power with net metering, zero export or limited export, or using batteries to deal with time of use/peak rates.



## ▼ STANDARD FEATURES

- Continuous AC power 10.0 KW on battery, 11.4KW with PV
- UL1741SB sell to grid, self consumption with CT's, or Off-grid mode
- Residential and commercial
- Supports 120/240 split phase or 208VAC three phase (with three inverters)
- Stackable up to 9 units in split phase, 3 units in three phase.
- 100A AC pass through with input and output breakers for NEC compliance
- 30A, 50A & 60A 120/240VAC branch circuit breakers with programmable relays for load shedding or AC inputs for generator and AC coupling.
- Four 15/20Amp 120V AC load breakers
- All AC and DC breakers are Magnetic Hydraulic allowing for 100% continuous duty
- Up to 200% array oversizing allowed with 3 MPPTs
- PV Arc Fault, Ground Fault and Rapid Shut Down included
- Supports up to 30A PV input current
- Supports AC coupling
- Seamless backup transition (<10ms)
- Standby generator connection for additional backup.
- 250 Amp CBI Magnetic Hydraulic battery breaker
- Supports 40-64VDC Lithium or Lead-acid battery
- Seamless operation with MNP Power LFP batteries
- Rated maximum battery charge/discharge current of 210A
- Supports self-consumption, zero export, and time of use grid profiles
- Remote configuration and upgrade
- 10 year warranty



## ▼ SPECIFICATIONS



|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Max. Efficiency (PV to AC)          | 98.0%                                                            |
| Max. Efficiency (BAT to AC)         | 94.5%                                                            |
| Max. PV Input Power                 | 15,000W Max.                                                     |
| Maximum PV Input Voltage            | 600V                                                             |
| Start-up Voltage                    | 90V                                                              |
| MPPT Operating Voltage Range        | 70v-550v                                                         |
| Max. useable PV current per MPPT    | 30A/22A/22A                                                      |
| Max current (Isc x 1.25) per MPPT   | 40A/30A/30A                                                      |
| Number of MPPT's                    | 3                                                                |
| Battery Type                        | Lithium-ion/Lead-acid or other                                   |
| Nominal battery voltage             | 48V                                                              |
| Battery voltage range               | 40v-64v                                                          |
| Max. charge/discharge current       | 210A/210A                                                        |
| Grid Frequency Range                | 45Hz-55Hz/55Hz-65Hz (Adjustable)                                 |
| Power Factor                        | > 0.99 @rated power (Adjustable 0.8 LG - 0.8 LD)                 |
| THD Current                         | <3% (Rated Power)                                                |
| Continuous Output Power             | 10.0KW on battery/11.4KW with PV                                 |
| Continuous Output Current           | 42A on battery/47.5A with PV                                     |
| Peak Output Apparent Power(1s)      | 20,000VA (13,000VA per leg)                                      |
| Nominal Output Voltage              | 120/240V (Split phase) / 208V (2/3 phase)                        |
| Nominal Output Frequency            | 50Hz /60Hz                                                       |
| Transfer Time                       | <10ms                                                            |
| THD Voltage                         | <3% @100% Resistive Load                                         |
| DC PV Switch                        | YES                                                              |
| AC Overcurrent Protection           | YES                                                              |
| DC/AC Overvoltage Protection        | DC Type II, AC Type III                                          |
| AC Short Circuit Protection         | YES                                                              |
| DC Reverse connection               | YES                                                              |
| Surge Arrester                      | DC Type II, AC Type II                                           |
| PV Insulation Resistance Detection  | YES                                                              |
| PV Array Leakage Current Protection | YES                                                              |
| PV Array AFCI                       | YES                                                              |
| PV Array RSD                        | YES (APsystems Sunspec)                                          |
| Generator input                     | 60A                                                              |
| Max. Operation Altitude             | 9843FT/3000M (>2000M, 10% derate per 1000M)                      |
| Ingress Protection Degree           | IP65/NEMA 3R                                                     |
| Operating Temperature Range         | -25-60°C (>45°C derating)                                        |
| Relative Humidity                   | 0~100%                                                           |
| Cooling Method                      | Fan Cooling                                                      |
| Mounting                            | Wall bracket                                                     |
| Dimensions (W*H*D)                  | 16.5W x 38.3L x 10.27D inch (420mm x 973mm x 261mm)              |
| Weight                              | 49Kg/108lb                                                       |
| PV Connection Terminals             | Two inputs per MPPT, 8AWG max wire size                          |
| Display                             | APP + LED+ LCD                                                   |
| Communication Interface             | RS485/CAN (for BMS), DRM/RS485 (for meter), RS485                |
| Monitoring/programming              | Bluetooth/WiFi/LAN                                               |
| Agency Approvals                    | UL1741SB, IEEE1547:2018, HECO SRD 2.0/UL 1741/CSA C22.2/UL 1699B |
| EMC                                 | FCC Part 15 Class B                                              |
| Warranty                            | 10 Years                                                         |