

# MN15-12KW-AIO

## ALL IN ONE INVERTER SYSTEM



The new MidNite **MN15-12KW-AIO** All in One inverter is a testament to innovation coming from a company that you have known and trusted for many years as an industry leader. The MidNite All in One (AIO) is a 11,400 watt system that features three powerful MPPT charge controllers and three 120/240VAC programmable outputs that can be utilized for load shedding or opportunity loads. The MidNite AIO employs features not found in other AIO inverters following the MidNite legacy of providing industry shaping products.

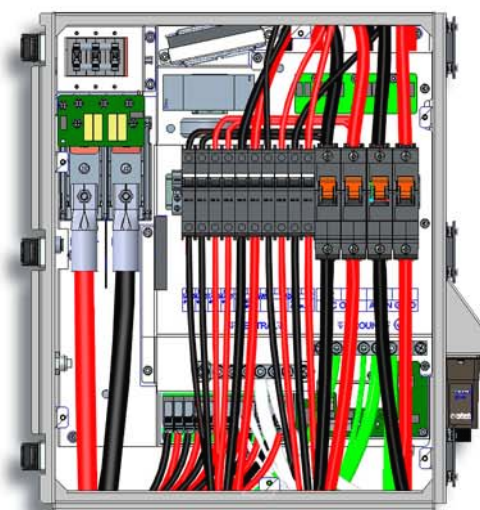
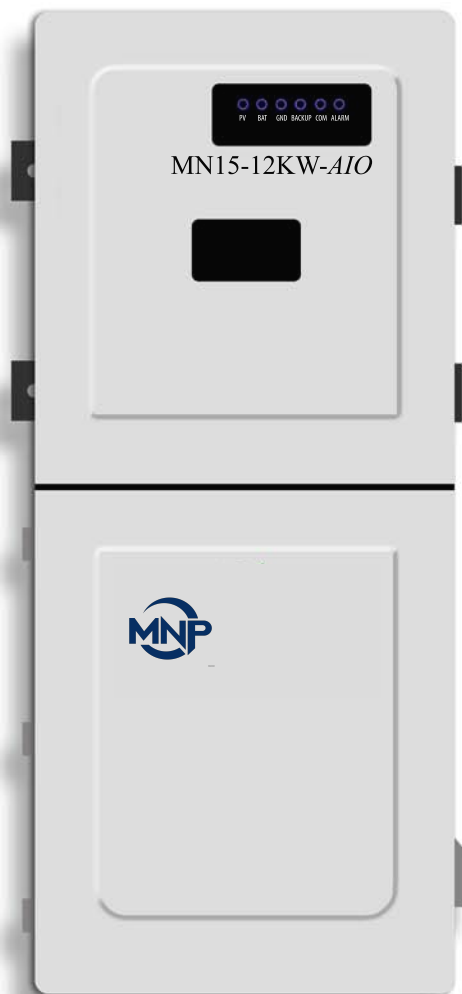
The AIO's 3 integrated 120/240VAC outputs can replace an external programmable distribution box saving you thousands in installation costs. Heavy use loads can be controlled based on user defined parameters. The MidNite AIO provides customizable settings to tailor your system to perfectly meet your electrical needs and flexibility.

The AIO's 3 MPPT inputs are capable of utilizing the full 600VDC allowed by the NEC. Most All in One inverters only have an MPPT window up to 500VDC. The AIO takes advantage of the full allowable 600VDC allowing you more powerful arrays to meet your usage demands.

Real time monitoring and control through our web based app allows you to view your system online in addition to view the inverters performance from the built in display. MidNite is committed to providing innovative reliable products to the solar industry in addition to view based on customer demand.

### Standard features:

- 30A, 50A & 60A 120/240VAC branch circuit breakers with programmable relays for load shedding and AC inputs for generator and AC coupling.
- Four 15/20Amp 120V AC load breakers
- UL1741SB sell to grid, self consumption with CT's or Off grid mode
- Residential and commercial
- Up to 200% oversizing allowed with 3 MPPTs
- Supports up to 30A PV input current
- Supports AC coupling
- Supports self-consumption
- Our standard Battery Temp Sensor included with every inverter
- Arc Fault, Ground Fault and Rapid shut down included
- 100A AC pass through with input and output breakers for NEC compliance
- All AC and DC breakers are Magnetic Hydraulic allowing for 100% continuous duty
- 250 Amp CBI Magnetic Hydraulic battery breaker
- Supports 40-64VDC Lithium or Lead-acid battery
- Rated maximum battery charge/discharge current of 210A
- Stable Output Power
- Continuous 100% AC power 10.0 KW on battery / 11.4KW with PV
- Unbalance load surge kicks butt
- Supports 120/240/208VAC connections
- Seamless backup transition (<10ms)
- Stackable up to 9 units
- Standby generator connection for whole-home back up
- Remote configuration and upgrade
- 10 year warranty



# MN15-12KW-A/O

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### SPECIFICATIONS

|                                 |                                                                      |
|---------------------------------|----------------------------------------------------------------------|
| Max. Efficiency (PV to AC)      | 98.0%                                                                |
| Max. Efficiency (BAT to AC)     | 94.5%                                                                |
| Max. PV Input Power             | 15,000W Max.                                                         |
| PV Voltage                      | 600V                                                                 |
| Start-up Voltage                | 90V                                                                  |
| MPPT Operating Voltage Range    | 70V-550V                                                             |
| Max. Input Current per MPPT     | 30A/22A/22A                                                          |
| String (per MPPT)               | 6(2/2/2)                                                             |
| 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)                     |
| THDI                            | <3% (Rated Power)                                                    |
| Continuous Output Power         | 10.0 KW on battery / 11.4KW with PV                                  |
| Nominal Output Current          | 47.5A/47.5A                                                          |
| 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        | 50 Hz /60Hz                                                          |
| Transfer Time                   | <10ms                                                                |
| THDV                            | <3% @100% R Load                                                     |
| DC 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                                               |
| Insulation Resistance Detection | YES                                                                  |
| Leakage Current Protection      | YES                                                                  |
| AFCI                            | YES                                                                  |
| RSD                             | Yes (APsystems Sunspec)                                              |
| Generator                       | YES                                                                  |
| Max. Operation Altitude         | 9,843 ft (3,000 m)                                                   |
| 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 Way               | Terminals                                                            |
| Display                         | Wireless & APP + LED + LCD                                           |
| Communication Interface         | RS485/CAN (for BMS), DRM/RS485 (for meter), RS485                    |
| Included                        | Bluetooth/WiFi/LAN                                                   |
| Agency Approvals                | UL1741SB, IEEE1547: 2018, HECO SRD 2.0<br>UL 1741/CSA C22.2/UL 1699B |
| EMC                             | FCC Part 15 Class B                                                  |
| Warranty                        | 10 Years                                                             |