

# SOL-ARK | 12K

STAKABLE

HYBRID



+



**COMMERCIAL /  
MEDICAL**

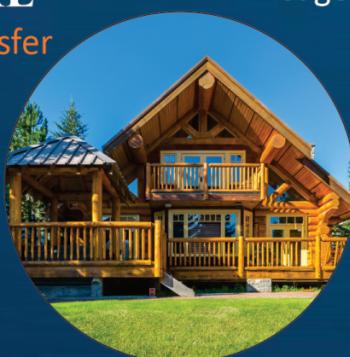
No Glitch Transfer



**MILITARY**  
Cage Code: 7U4P4



**GRID SELL**  
+Time of Use



**OFF-GRID**  
Battery Agnostic

**RETRO-FIT**  
AC Coupling

## Sol-Ark-12K-P Specifications

### Solar Output Power 12000W

|  |                         |
|--|-------------------------|
| Max allowed PV Power                           | 9000W+9000W = 16,500W   |
| Max PV power delivered to Battery & AC outputs | 12000W                  |
| Max DC voltage                                 | 500V@18A, 450V@20A      |
| MPPT voltage range                             | 150-425V                |
| Starting voltage                               | 175V                    |
| Number of MPPT                                 | 2                       |
| Solar Strings per MPPT                         | 2 w/o fuses, 3 w/ fuses |
| Max DC current per MPPT (self limiting)        | 20A@300V, 18A@400V      |
| Max AC Coupled Input (Micro/String Inverters)  | 7,600W                  |

### AC Output Power 9600W On Grid & 8000W Off Grid

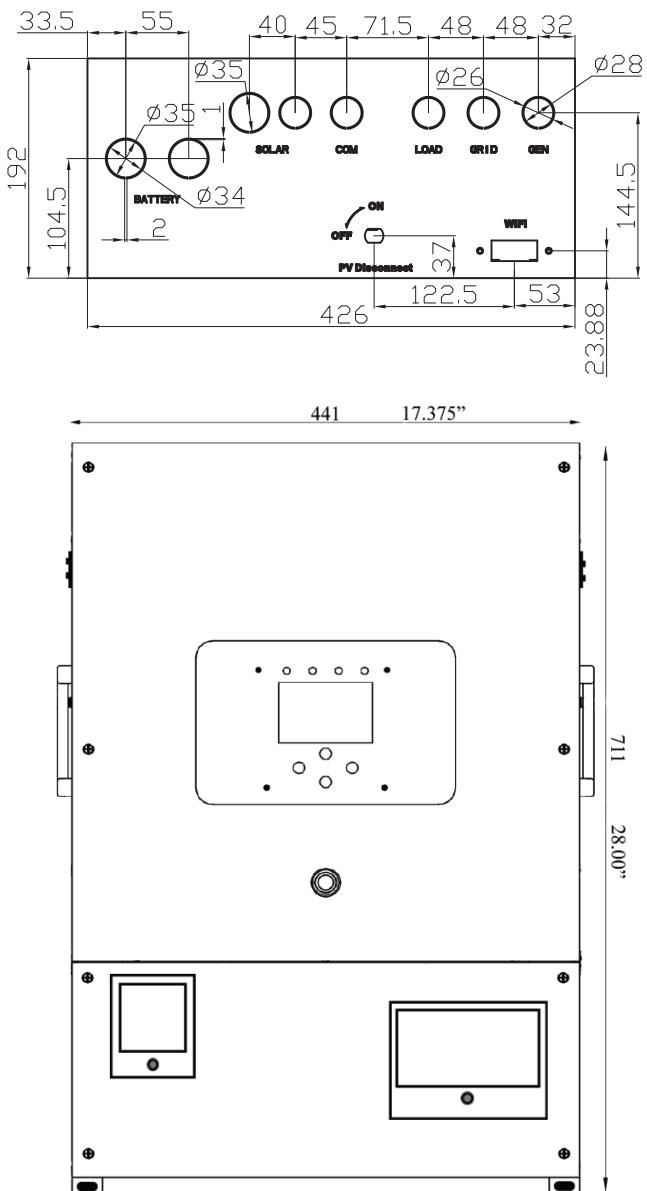
|  |   |
|--|---|
| Connections                                | 120/240/208V split phase                      |
| Continuous AC power to Grid (On Grid)      | 9600W 40A L-L (240V)<br>4800W 40A L-N (120V)  |
| Continuous AC power to Grid (Off Grid)     | 8000W 40A L-L (240V)<br>4800W 40A L-N (120V)  |
| Surge AC power 5sec                        | 20,000VA L-L (240V)<br>10,000VA L-N (120V)    |
| Parallel Stacking                          | 2-3 (240V), 3 or 6 (208V)                     |
| Frequency                                  | 60/50Hz                                       |
| Continuous AC power with Grid or Generator | 12000W 50A L-L (240V)<br>6000W 50A L-N (120V) |
| CEC Efficiency                             | 96.0% (Peak 97.0%)                            |
| Idle Consumption typical – no load         | 60W   |
| Sell back power modes                      | Limited to Household or<br>Full Grid-Tied     |
| Design (DC to AC)                          | Transformer less DC                           |
| Response Time (Grid-Tied to Off-Grid)      | 4ms   |
| Power Factor                               | +0.9 - 1.0                                    |

### Battery (optional) Output Power 8000W

|  |                         |
|--|-------------------------|
| Type   | Lead-Acid or Li-Ion     |
| Nominal DC Input                                   | 48V                     |
| Capacity   | 90 – 2000Ah             |
| Voltage Range                                      | 43.0 – 61.0V            |
| Continuous Battery charging output                 | 190A                    |
| Charging curve                                     | 3-stage w/ equalization |
| Grid to Battery Charging Efficiency                | 96.0%                   |
| External temperature sensor                        | included                |
| Current shunt for accurate % SOC                   | integrated              |
| External Generator Start based on voltage or % SOC | integrated              |
| Communication to Lithium battery                   | CanBus & RS485          |

### General

|  |                           |
|--|---------------------------|
| Dimensions (H x W x D)                           | 28.0" x 17.375" x 9.37"   |
| Weight   | 77 lbs                    |
| Enclosure  | NEMA type 1 (Indoor Use)  |
| Ambient Temperature (3 variable speed fans)      | -25 to 55C, >45C derating |
| Display  | Color touch screen        |
| Wi-Fi Communication (monitoring or SW updates)   | included                  |
| Snap on sensors for limited selling to Household | included                  |
| Standard Warranty (verified by HALT testing)     | 10 years                  |



### Protection & Certifications

|   |            |
|---|------------|
| Electronics certified safety by SGS labs to NEC & UL specs – NEC 690.4B & NEC 705.4/6                       | Yes        |
| Grid Sell Back – UL1741-2010/2018, IEEE1547a-2003/2014, FCC 15 class B, UL1741SA, CA Rule 21, HECO Rule 14H | Yes        |
| PV DC disconnect switch – NEC 240.15  | integrated |
| Ground Fault Detection – NEC 690.5  | integrated |
| PV rapid shutdown control – NEC 690.12  | integrated |
| PV Arc Fault detection – NEC 690.11/ UL1699B  | integrated |
| PV input lightning protection   | integrated |
| AC input/output 50A breakers  | integrated |
| Battery breaker / disconnect  | integrated |
| User wiring enclosure w/ ¾" & 1" knock-outs   | integrated |
| Solar Flare/EMP Hardened to 2015 MIL-STD-461G (Independently tested June 2018)                              | optional   |