



Sol-Ark Home Energy Solutions



A global energy technology leader with over 6 generations of hybrid inverters

Deep engineering expertise in smart energy solutions

A track record of results. For over a decade, Sol-Ark has been solving complex energy challenges with innovation and technology

Powered by a vast ecosystem including thousands of distributors, installers, EPCs, integrators, and battery manufacturers

Trusted by global Fortune 500 companies in telecommunications, retail, big tech, restaurants, and the largest space agency in the world

Sol-Ark-12K-P

| Input Data (PV) | |
|---|--|
| Max. Allowed PV Power (STC) | 13,000W |
| Nominal Voltage Range | 175 – 425V |
| Startup Voltage | 125V |
| Max. Input Voltage | 500V |
| Max. Input Current per MPPT | 20A (self-limiting) |
| No. of MPP Trackers | 2 |
| No. of PV Strings per MPPT | 2 |
| Max. AC Coupled Input | 9,600W |
| Output Data (AC) | |
| Nominal AC Voltage | 120/240V, 120/208V, 220V |
| Grid Frequency | 50 / 60Hz |
| Real Power, Max. Continuous | 9,000W ¹ |
| Max. Output Current | 37.5A |
| Peak Apparent Power (10s, off-grid) | 16,000VA @ 240V |
| Peak Apparent Power (100ms, off-grid) | 25,000VA @ 240V |
| Max. Output Fault Current (100ms) | 104A |
| Max. Grid Passthrough Current | 63A |
| Power Factor Output Range | +/- 0.9 adjustable |
| Backup Transfer Time | 4ms |
| CEC Efficiency | 96.5% |
| Max. Efficiency | 97.5% |
| Design (DC to AC) | Transformerless DC |
| Stackable | Up to 9 in parallel |
| Battery Input Data (DC) | |
| Battery Technologies | Lithium / Lead Acid |
| Nominal DC Voltage | 48V |
| Operating Voltage Range | 43 – 63V |
| Capacity | 50 – 9900Ah |
| Max. Battery Charge / Discharge Current | 185A |
| Charging Controller | 3-Stage with Equalization |
| Grid to Battery Charging Efficiency | 96.0% |
| External Temperature Sensor | Included |
| Current Shunt for Accurate % SOC | Integrated |
| Automatic Generator Start | Integrated |
| Communication to Lithium | CANBus & RS485 |
| General Data | |
| Dimensions (H x W x D) | 750 x 450 x 254 mm / 29.5 x 17.7 x 10 in |
| Weight | 35.4 kg / 78 lb |
| Enclosure | IP65 / NEMA 3R |
| Ambient Temperature | -25 – 55°C, > 45°C Derating |
| Noise | < 30 dB |
| Idle Consumption – No Load | 60W |
| Communication and Monitoring | Included |
| Standard Warranty | 10 Years |
| Protection and 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, UL1741SB, 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 | Integrated |
| PV Input Lightning Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| AC Output Breaker - 63A | Integrated |
| 250A Battery Breaker / Disconnect | Integrated |
| Surge Protection | DC Type II / AC Type II |

1. Max. continuous AC output of 9,000W (loads / grid sell) + DC output of 3,000W (batteries) = 12,000W total