

Sol-Ark 12K-P Spec Sheet



Solar II	nput Power 12000W
Max Allowed PV Power	6500W + 6500W = 13000W
Max PV Power Delivered to Battery & AC Outputs	12000W
Max DC Voltage (Voc)	500V @ 18A, 450V @ 20A
MPPT Voltage Range	150-425V
Starting Voltage	125V
Number of MPPT	2
Max Solar Strings Per MPPT	2
Max DC Current per MPPT (Self Limiting)	20A
Max AC Coupled Input (Micro/String Inverters)	9600W

AC Output Power 9kW	On-Grid & Off-Grid
Connections	120/240/208V Split Phase
Continuous AC Power to Grid (On-Grid)	9000W 37.5A-L (240V)
Continuous AC Power to Load (Off- Grid)	9000W 37.5A-L (240V)
Surge AC Power 10sec	16,000VA L-L (240V)
Surge AC Power 100ms	25,000VA L-L(240V)
Parallel Stacking	Yes
Frequency	60/50Hz
Continuous AC Power with Grid or Generator	15120W 63A L-L (240V)
CEC Efficiency	96.5% (Peak 97.5%)
Idle Consumption Typical—No Load	60W
Sell Back Power Modes	Limited to Household/Fully Grid-Tied
Design (DC to AC)	Transformerless DC
Response Time (Grid-Tied to Off-Grid)	4ms
Power Factor	+/- 0.9 - 1.0

Battery (optional) O	utput Power 9000W
Туре	Lead-Acid or Li-Ion
Nominal DC Input	48V
Capacity	50 — 9900Ah
Voltage Range	43.0 — 63.0V
Continuous Battery Charging Output	185A
Charging Curve	3-Stage w/ Equalization
Grid to Batt Charging Efficiency	96.0%
External Temperature Sensor	Included
Current Shunt for Accurate % SOC	Integrated
External Gen Start Based on Voltage or %SOC	Integrated
Communication to Lithium Battery	CanBus & RS485

General	
Dimensions (H x W x D)	30.0" x 18.3" x 10.0"
Weight	78 lbs
Enclosure	NEMA 3R
Ambient Temperature	-25-55°C, >45°C Derating
Installation Style	Wall-Mounted
Wi-Fi & LAN Communication	Included
Standard Warranty (verified by HALT Testing)	10 Years

Protections & 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, IEE- E1547a-2003/2014, FCC 15 Class B, UL1741SA,	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 Breakers - 63A	Integrated
250A Battery Breaker / Disconnect	Integrated
Surge Protection	DC Type II / AC Type II

On Grid PV to AC Efficiency @ CE

AC Coupled AC A	AC CC AC CC QV V V V V V V V V V V V V V V V V	Panasonic (Darfon) 2xH5001 \$6,200 2x6KW 2x5.5KW 13KW 13KW 120A 120A 120A 10 yr 10 yr X X X	SolarEdge Energy Hub 7.6 32xP400 \$7,600 7.6KW 7.6KW 6.1KW 6.9KW? 1ext 92.5% 93.5% 93.5% 93.5% 93.5% 14% 3000ms 7 12/20/25 yr 7 X X X	Generac PWRcell 7.6 +4xS2500 \$6,500 11KW 7.6KW 9KW 12KW 6.7KW 99.0% 93.0% 93.0% 1000ms X X X X X X Y	DC Transformerless rk 8K Sol-Ark 5K 100 \$4,500 W 6.5KW W 5KW W 16KW W 60W 5% 97.5% 96.0% 99.5% 5% 95.5% 100 4ms 7 0 yr 5 yr 0 x	Sol-Ark 8K Sol-Ark 5K \$6,100 \$4,500 \$6,100 \$4,500 \$6,100 \$4,500 \$6,100 \$4,500 \$6,500 \$6,500 \$6,000 \$6,500 \$185A \$120A \$120A \$185A \$120A \$120A \$185A \$120A \$1	Sol-Ark 12K \$6,900 12KW 9KW 16KW 60W 185A color touch 97.5% 96.0% 95.5% 4ms 7% 10 yr 7 7 7 7 7 7 7 7 7 7 7 7 7	Brand & Model MSRP Price Solar PV Continuous Power Inverter AC Continuous Power Inverter Battery Continuous Power Inverter AC Peak Power (5s) System Idle Power AC to DC Charger AC to Batt Efficiency @ 65% AC to Batt Efficiency @ 65% Batt to AC Efficiency @ 65% Batt to AC Efficiency @ 65% Grid Failure Of Use or Off Grid PV -> Batt -> AC Losses @ 65% Grid Failure UPS Transfer Time Low Cost Easy Install Warranty AC Coupling to existing Inverters Parallel Stacking 120/240/208V 3Phase Generator Charging C Load Shedding for TOU & Off Grid California & HECO (Grid Sell)
28KWh	21.0KWh	18KWh	2x9.8KWh	18KWh 3500c	20KWh	20KWh	20KWh	
28KWh	21.0KWh	18KWh	2x9.8KWh	18KWh 3500c	20KWh	20KWh	20KWh	
28KWh	21.0KWh	18KWh	2x9.8KWh	18KWh 3500c	20KWh	20KWh	20KWh	
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				`				100/000/000
~	~	\	\	Х	Х	X	~	Parallel Stacking
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10 vr	10 vr	10 vr	12/20/25 vr	10 vr	5 vr	5/10 vr	10 vr	Warranty
<u> </u>	~	<u> </u>			V	V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Low Cost Easy Install
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2000ms	2000ms	20ms	3000ms	1000ms	4ms	4ms	4ms	Grid Failure UPS Transfer Time
								PV -> Batt -> AC Losses @ 65%
15 %	L5 %	LY%	14%	%CT	/ 7/0	1%	/ 7/0	DV -> Batt -> AC / osses @ 65%
130/	150/	100/	1/0/	1 0/	70/	70/	70/	Time of Use or Off Grid
97.0%	97.0%	95.5%	%0.86	95.5%	96.5%	96.5%	96.5%	n Grid PV to AC Efficiency @ CEC
95.0%	95.0%	90.0%	93.5%	93.0%	95.5%	95.5%	95.5%	Batt to AC Efficiency @ 65%
33.0/0	93.0%	20.0/0	00.0/0	33.0%	30.0/0	20.0/0	20,0/0	AC to Batt Elliclelicy @ 65%
%0.56	%0.5b	%0.0e	93.5%	93.0%	%0.3e	%0.Ae	%0.36	AC to Batt Efficiency @ 65%
92.5%	92.0%	91.0%	92.5%	92.0%	97.5%	97.5%	97.5%	PV to Batt Efficiency @ 65%
×	×	Text	Text	Text	touch	touch	touch	User Interface
					color	color	color	
N/A	N/A	120A	5KW?	6.7KW	120A	185A	185A	AC to DC Charger
78W		200W			60W	60W	W09	System Idle Power
14KW	8.8KW	13KW	6.9KW	12KW	16KW	16KW	16KW	Off Grid Inverter AC Peak Power (5s)
2x5KW	2x3.8KW	2x5.5KW	6.1KW	9KW	5KW	8KW	9KW	Inverter Battery Continuous Power
2x5KW	10.4KW	2x5KW	7.6KW	7.6KW	5KW	8KW	9KW	Inverter AC Continuous Power
12KW	10.4KW	2x6KW	7.6KW	11KW	6.5KW	9KW	12KW	Solar PV Continuous Power
\$19,400	\$28,700	\$6,200	\$7,600	\$6,500	\$4,500	\$6,100	\$6,900	MSRP Price
String Inv	+36xIQ7P	2xH5001	7.6 32xP400	+4xS2500				Brand & Model
Powerwall2 +		(Darfon)	Energy Hub	PWRcell 7.6	Sol-Ark 5K	Sol-Ark 8K	Sol-Ark 12K	
Tesla 2x		Panasonic	SolarEdge	Generac	· ·	-	•	
oupled	AC Co				sformerless	DC Trans		Design Type