

The SR5K-UL Battery Module / Sol-Ark 12K is a battery energy storage system (BESS) for residential use. Its rechargeable lithium iron phosphate (LFP) battery modules provide safe and reliable energy storage for solar self-consumption, time-based control, and home backup.

The system is outdoor-rated, simple to install and compatible with most low voltage (48V) inverters from the industry's leading manufacturers, including Sol-Ark, SMA, Schneider, Outback, Megarevo and others.



Solar

Max Allowed PV Power	6500W + 6500W = 13000W
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

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 House/Fully Grid-Tied
Design (DC to AC)	Transformerless DC
Response Time (Grid-Tied to Off-Grid)	4ms
Power Factor	+/- 0.9 - 1.0

General

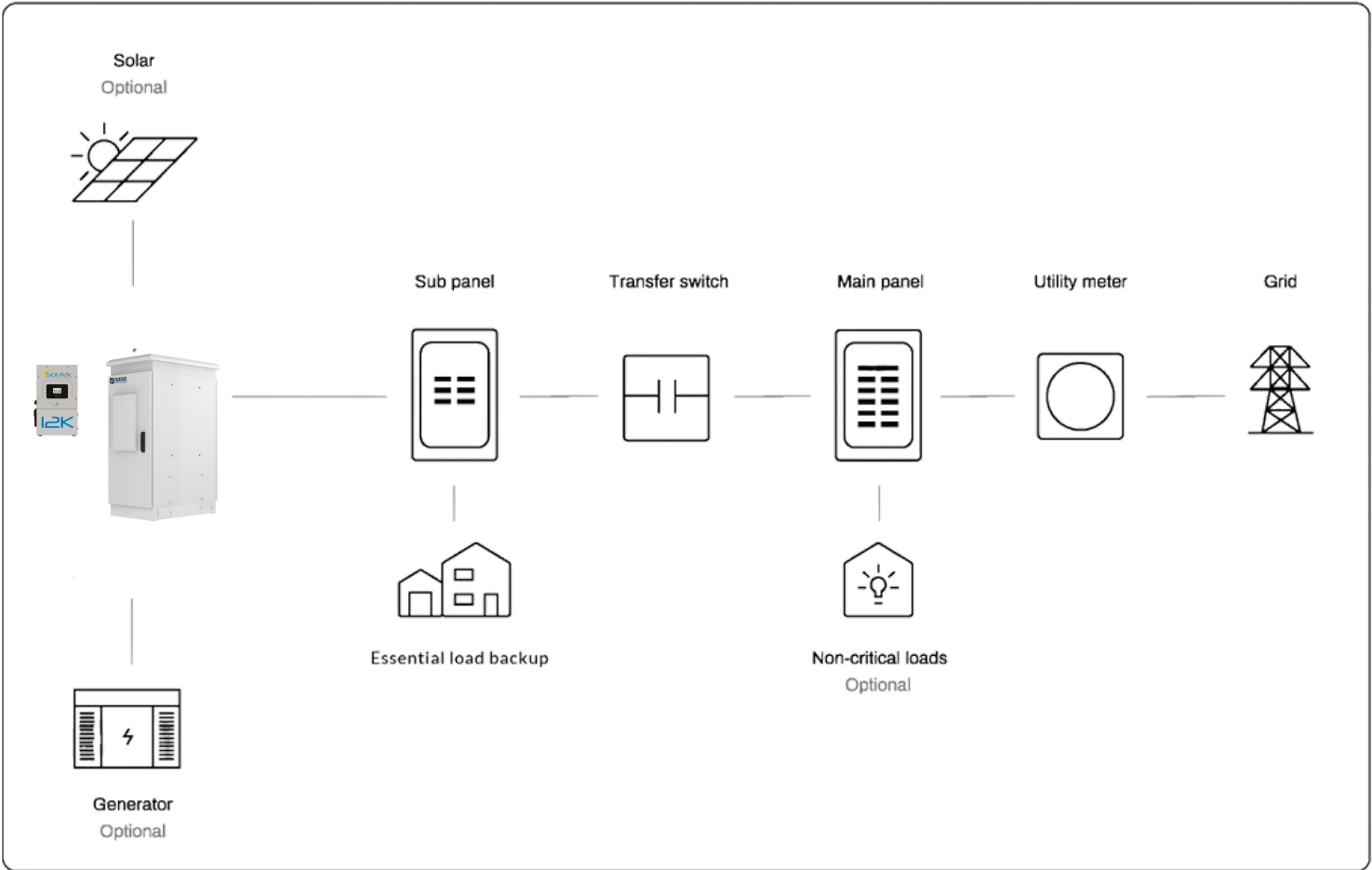
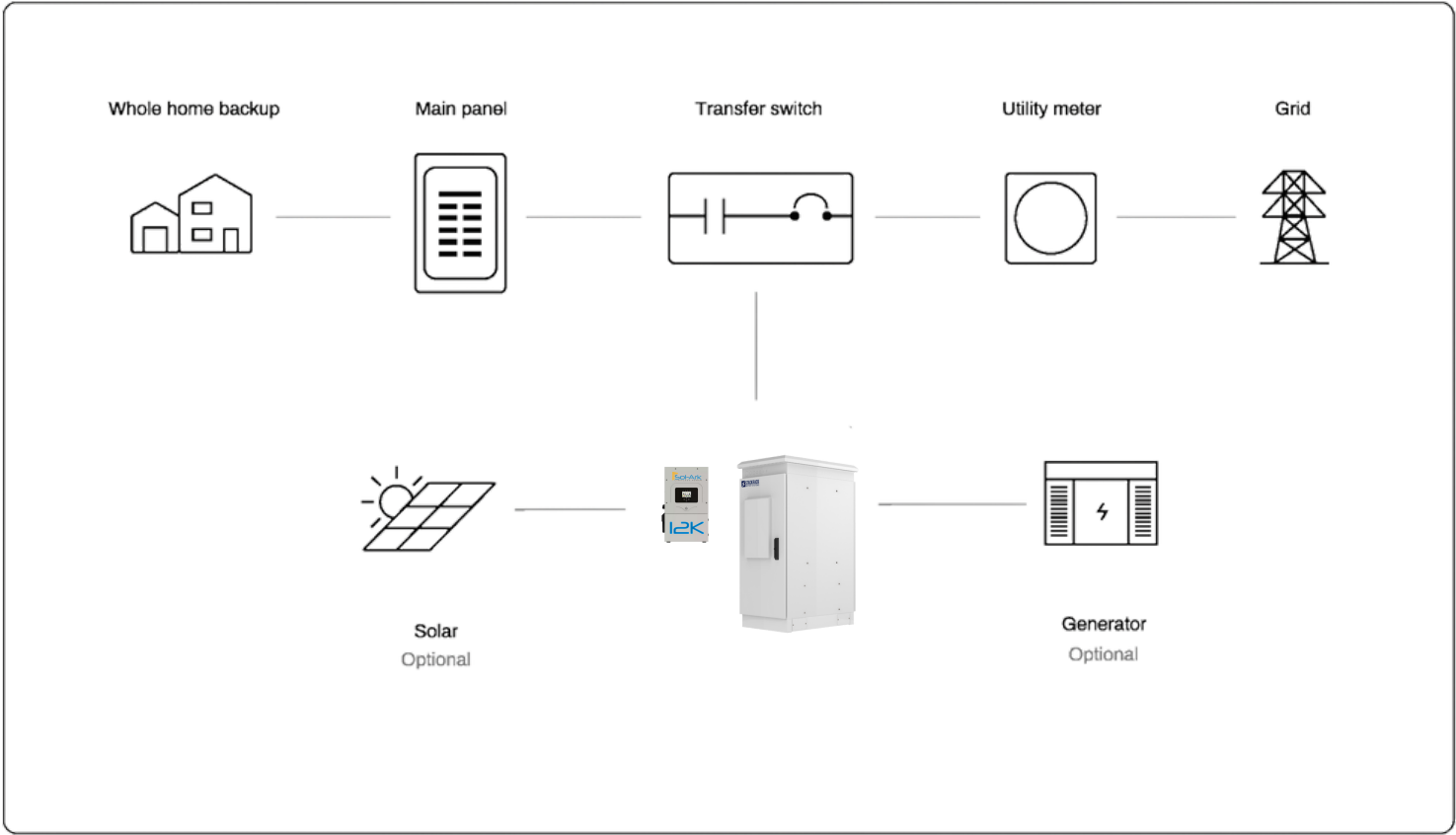
Inverter Dimensions (H x W x D)	30.0" x 18.3" x 10.0"
Cabinet Dimensions (H x W x D)	50.5" x 29.7" x 20.9"
Inverter Weight	78 lbs
Cabinet Weight with Batteries	847 lbs
Inverter Enclosure	NEMA 3R
Cabinet Enclosure	IP55
Ambient Temperature (Inverter)	-13 to 131°F, >113°F Derating
Inverter Installation Style	Wall-Mounted
Cabinet Installation Style	Floor-Mounted
Wi-Fi & LAN Communication	Included
Standard Warranty	10 Years

Specifications

Type (Chemistry)	Lithium Iron Phosphate (LiFePO4)
Nominal Voltage:	51.2 VDC
Voltage Range:	47.5 to 58 VDC
Nominal Capacity:	up to 600 Ah
Nominal Energy:	up to 30.72 kWh
Peak Discharge Rate:	31.32 kW @ 15s (1C) (5.22 kW/module)
Maximum Continuous Discharge Rate:	300 A (15.36 kW DC) (50A/module)
Standard Continuous Discharge Rate:	300 A (15.36 kW DC) (50A/module)
Maximum Continuous Charge Current:	300 A (50A/module)
Standard Continuous Charge Current:	300A (50A/module)
Round-Trip Efficiency:	≥95%
Communication Protocol:	RS232, RS485, CAN
Battery Connection Type:	Parallel
Cycle Life:	≥6000 cycles @ 90% DOD
Battery Lifespan:	≥15 years
Temperature Range for Charging:	32 to 122°F
Temperature Range for Discharging:	14 to 122°F
Ambient Temperature for Operation:	32 to 95°F
Conduit Knockouts:	1.5", 1.0" (2x), 0.75" (2x), 0.5" (2x)

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, IEEE1547a-2003/2014, FCC 15 Class B, UL1741SA,	Yes
• Certified to UL9540:2020	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 & AC Type II



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UL 9540 Certification