

Technical Specifications - sonnenEvo

The sonnenEvo is a stackable outdoor solution that offers up to 30 kWh of battery capacity. The sleek design combines smart energy management with the safest and longest lasting batteries to efficiently manage home energy usage throughout the day, store excess solar power for use at night and provide reliable backup power during planned and unplanned power outages.

Model number	OUTSCORE-10
Weight per unit (approximate)	352 lbs (160 kg)
Dimensions per unit W"/H"/D"	28 / 53.9 / 15.8
Grid integration	AC coupled
Ambient temperature	32°F - 113°F (0°C - 45°C) 41°F - 95°F (5°C to 35°C) (MAX power)
Applications	Time-of-use, Solar self-consumption, Emergency backup power

Stacked specifications

Number of stacked units	1	2	3
Usable capacity	10 kWh	20 kWh	30 kWh
Nominal power rating ¹ (Grid-tied output at 104°F)	4.8 kW	9.6 kW	14.4 kW
Inverter efficiency	94.4% peak		
Max Round-trip efficiency ²	85.4% peak		
On-grid pass through	35 A	200 A (requires AC Connections module)	200 A (requires AC Connections module)
Installation restrictions	None	None	External devices and configurations complying with Rule 21 may be required for CA

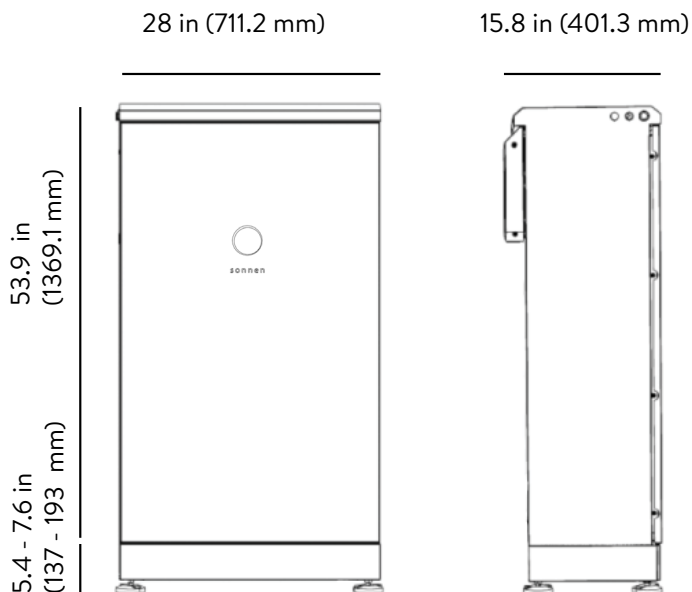
Off-grid specifications

No disconnect / continuous operation	0 A - 25 A	0 A - 50 A	0 A - 75 A
5s to disconnect	30 A - 36 A	60 A - 72 A	90 A - 108 A
450ms to disconnect	36 A - 50 A	72 A - 100 A	108 A - 150 A
Immediate shutdown	>50 A	>100 A	>150 A

General specifications

System cooling	Forced air
Communication ports	Ethernet
Communication protocols / Control	API available to select partners
Seismic rating	IEEE 693
Noise emission	<65 dB
Total harmonic distortion	<5%
Maximum recommended PV inverter per sonnen system¹	6 kW
Maximum operation altitude	6562 ft (2000 m)

Measurements



Compliance information

Certifications	UL1741, UL1973, UL9540, UN38.3, UL9540A
Grid connections	IEEE 1547.1, Prepa 2013
Emissions	FCC Part 15 Class B (inverter)
Immunity	IEC 61000-4-2/3/4/5/6/8
Transient protection	IEEE C62.41 Class B
Warranty⁴	10 year or 10,000 cycle system warranty – includes inverter, battery modules, cabinet and components
Enclosure rating	IP56

Battery specification



Nominal DC voltage	102 VDC
DC battery input voltage	96 - 112 VDC
Max charge current	39.99 A per module
Cell discharge⁵	5 kWh with 100% DoD
Cell chemistry	Lithium iron phosphate
Over-current Protection	Fuse protection

We reserve the right to make technical changes. The values, outputs, other technical data, images, and diagrams in this prospectus and in data sheets, advertisements, and other promotional documents are approximate guidelines in all cases where they have not been identified as binding.

1 At cos phi =1

2 Maximum round trip efficiency shown is calculated using the single cycle round trip efficiency (SCRTE) formula used by SGIP administration in the State of California, as of the date of publication of this Spec Sheet.

3 In off-grid mode, the battery has a maximum charge limitation of 4.48 kW for 1 system, 8.3 kW for a 2 stack system and 11.8 kW for a 3 stack system.

4 Please observe our applicable warranty conditions.

5 The sM4 battery modules are 5.5kWh in total capacity and represent 5kWh of usable capacity per module.

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