

Technical Specifications | **sonnenCore+**

The sonnenCore+ is a stackable indoor solution that offers up to 60 kWh of battery capacity. The sleek design combines smart energy management with safe and long-lasting batteries to efficiently manage solar 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	SCORE-P10 (10 kWh)	SCORE-P20 (20 kWh)
Weight per unit (approximate)	353 lbs (160 kg)	525 lbs (238 kg)
Dimensions W" / H" / D" (adjustable height from ground)	27 / 69.5 / 14 27 / 71.5 / 14 (with legs elevated)	
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 (SCORE-P10 / SCORE-P20)	10 kWh / 20 kWh	20 kWh / 40 kWh	30 kWh / 60 kWh
Nominal power rating (Grid-tied output at 104 °F)	4.8 kVA	9.6 kVA	14.4 kVA
Inverter efficiency	94.4 % peak		
Max Round-trip efficiency¹	85.4 % peak		
On-grid pass through	35 A	200 A <small>(requires AC Connections module)</small>	200 A <small>(requires AC Connections module)</small>
Installation restrictions	None	None	None

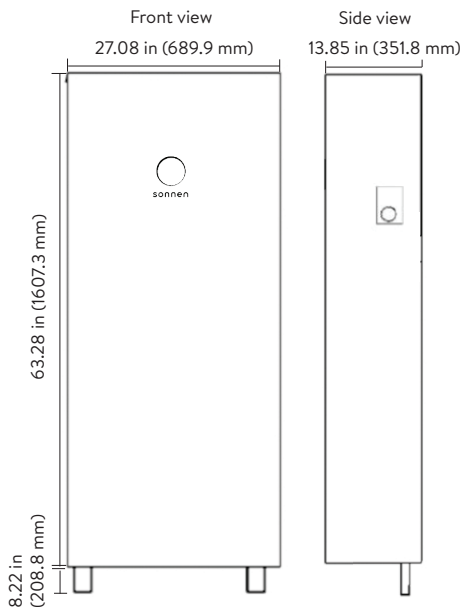
Off-grid specifications

No disconnect / continuous operation (RMS)	0 A - 25 A	0 A - 50 A	0 A - 75 A
5 s to disconnect (RMS)	30 A - 36 A	30 A - 72 A	90 A - 108 A
450 ms to disconnect (RMS)	36 A - 50 A	72 A - 100 A	108 A - 150 A
Immediate shutdown	76 A peak	152 A peak	228 A peak

General specifications

System cooling	Natural convection
Communication ports	Ethernet
Communication protocols / Control	API available to select partners
Seismic rating	IEEE 693
Noise emission	< 25 dB
Total harmonic distortion	< 5 %
Max operation altitude	6562 ft (2000 m)
Maximum recommended PV per sonnen system²	6 kVA
Smallest room volume SCORE-P20	12.15 m ³

Dimensions



Compliance information

Certifications	UL1741, UL1973, UL9540, UN38.3, UL9540A
Grid Code	UL1741SA, UL1741SB, IEEE 1547, Prepa 2013
Emissions	FCC Part 15 Class B (inverter)
Immunity	IEC 61000-4-2:2008, IEC 61000-4-3:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014, IEC 61000-4-6:2013, IEC 61000-4-8:2009
Transient protection	IEEE C62.41 Class B
Warranty³	10 year or 10,000 cycle system warranty - includes inverter, battery modules, cabinet and components
Enclosure rating	IP30

Battery specification

Nominal DC voltage	102 VDC
DC battery input voltage	96 - 112 VDC
Max charge current	39.99 A per module
Cell discharge⁴	5 kWh with 100 % DoD
Cell chemistry	Lithium iron phosphate
Over-current protection	Fuse protection

¹Maximum round trip efficiency shown is calculated using the single cycle round trip efficiency (SCRTE) formula used by SGIIP administration in the State of California, as of the date of publication of this Spec Sheet.

²In 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. In off-grid mode, exceeding these limits (accounting for load) will cause the microgrid to fail.

³Please observe our applicable warranty conditions.

⁴The sM4 battery modules are 5.5kWh in total capacity and represent 5kWh of usable capacity per module.

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