# S O L U N A<sup>TM</sup> A U

POWER DESIGNED FOR NIGHT AND DAY





## ENVIRONMENT

An investment in clean, affordable energy – being eco-friendly begins at home.



## SECURITY

Blackout protection for energy security and peace of mind 24/7.



## INDEPENDENCE

Solar-energy storage for self-sufficiency and cheaper electricity.

## ABOUT US

Soluna Australia provides safe, premium-quality, battery-based solar-energy storage systems for residential, commercial, industrial and mining applications.

Formed via a collaboration between Lithium Australia<sup>NL</sup> and DLG Energy, we're part of a wider group focused on sustainability in lithium mining, processing and battery production, as well as the recycling of spent batteries, in order to create a circular battery economy.

## $S \cap L \cup N \wedge^{\sim} \Lambda \cup$



### SOLUNA AUSTRALIA - committed to sustainability



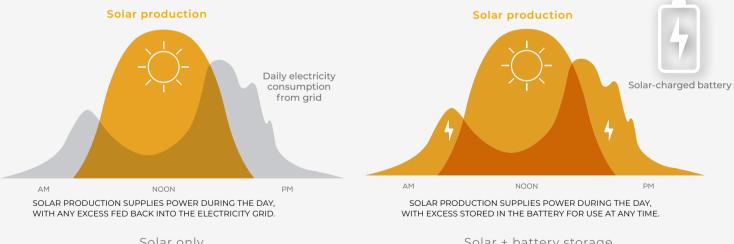
At the end of their useful life, our products are recycled by Lithium Australia subsidiary Envirostream Australia, which recovers all the active components from the lithium-ion batteries. Then, as in Step 2, Lithium Australia subsidiary VSPC uses these to create materials for new lithium-ion batteries. The result is a circular, sustainable battery economy.

# ENVIRONMENT

POWER DESIGNED FOR CLEAN, AFFORDABLE ENERGY

## SYNCHRONISING WITH THE SUN

Soluna Power Banks store renewable solar energy and release it on demand. In so doing, they minimise pollution and maximise convenience by leveraging the power of the sun all day, every day.



Solar only

Solar + battery storage

## CLEAN, AFFORDABLE ENERGY

During the day, your solar array supplies your energy needs and charges your Soluna battery storage system. When the battery's full, any surplus power is returned to the local grid, saving you money and helping protect the environment.





## POWER BANK FEATURES

- Intelligent power management.
  - Simple programming, plus power history and data analysis.

SOLUNY

- Touch-screen interface.
- Secure battery access door.
- Blackout protection.
- Generator input.
- Online monitoring.
- AC & DC coupling.
- Height-adjustable feet for level appearance and stability.

## BATTERY MODULE 4K PACK

TECHNICAL SPECS



#### POWER

Battery type	LFP	
Capacity	3.84 kW	h
Depth of discharge	90%	
Voltage	51.2 VDC	
Certification	Cell:	UL1642
	Pack:	UN38.3, UL1973,
		& IEC62619
Max. charge/discharge	50 A	
Operating temperature	-10° to 45	i° C
Storage temperature	-30° to 60° C	
Humidity conditions	5% to 95%	

#### MISCELLANEOUS

Installation	Floor install indoors or under cover outdoors, or within a Power Bank casing
Weight	60 kg
Dimensions (H x W x D)	436 x 678 x 205 mm
Warranty	10-year standard warranty

## BATTERY MODULE 15K PACK HV

TECHNICAL SPECS



#### POWER

Battery type	NCM	
Capacity	15 kWh	
Depth of discharge	80%	
Voltage	410 V	
Certification	Cell:	UL1642
	Pack:	UN38.3, UL1973,
		& IEC62619
Max. charge/discharge	30 A	
Operating temperature	-10° to 45	5° C
Storage temperature	-20° to 60	D° C
Humidity conditions	5% to 95%	%

#### MISCELLANEOUS

Installation	Floor install indoors
Weight	148 kg
Dimensions (H $\times$ W $\times$ D)	1205 (±3) x 654 (±2) x 227 (±2) mm
Warranty	10-year standard warranty

## POWER BANK S4



#### POWER

Inbuilt hybrid inverter

DC power4AC power3AC voltage2PV MPPT voltage3Battery type3Capacity3Battery voltage5Max. charge/discharge5Depth of discharge6Battery modules1HDMI interface7Operating temperature5Humidity conditions5Certification6

468 kW 3.6 kW 230 VAC 50 Hz 125-425 VDC I FP 3.84 kWh 51.2 VDC 50 A 90% 1 7" LCD touch screen -10° to 40° C 5% to 95% Cell: UL1642 UL1973 IEC62619:2017 Pack: System: IEC 62109-1 & IEC62109-2 AS/NZS 60950.a AS4777-2.2015

#### MISCELLANEOUS

Installation Weight Dimensions (H x W x D) Warranty Floor install indoors 85 kg (not including battery) 1230 x 700 x 340 mm 10-year standard warranty\*

\* NB: 2-year warranty for LCD touch screen, 5-year warranty for circuit breakers.

## **POWER BANK S8**

TECHNICAL SPECS



#### POWER

Inbuilt hybrid inverter

DC power	6.5 kW	
AC power	5.0 kW	
AC voltage	230 VAC	50
PV MPPT voltage	125-425	VDC
Battery type	LFP	
Capacity	7.68 kW	h
Battery voltage	51.2 VDC	2
Max. charge/discharge	100 A	
Depth of discharge	90%	
Battery modules	1 or 2	
HDMI interface	7" LCD t	ouc
Operating temperature	-10° to 4	0° C
Humidity conditions	5% to 95	6%
Certification	Cell:	UL
	Pack:	UL
	<u> </u>	

) Hz ch screen \_1642 L1973 IEC62619:2017 System: IEC 62109-1 & IEC62109-2 AS/NZS 60950.1 AS4777-2.2015

#### MISCELLANEOUS

Installation	
Weight	
Dimensions (H x W x D)	
Warranty	

Floor install indoors 120 kg (not including battery/s) 1335 x 750 x 565 mm 10-year standard warranty\*

\* NB: 2-year warranty for LCD touch screen, 5-year warranty for circuit breakers.

## POWER BANK S12

TECHNICAL SPECS



#### POWER

Inbuilt hybrid inverter

DC power	6.5 kW
AC power	5.0 kW
AC voltage	230 VAC 5
PV MPPT voltage	125-425 VE
Battery type	LFP
Capacity	11.5 kWh
Battery voltage	51.2 VDC
Max. charge/discharge	100 A
Depth of discharge	90%
Battery modules	1, 2 or 3
HDMI interface	7" LCD tou
Operating temperature	-10° to 40°
Humidity conditions	5% to 95%
Certification	Cell: L
	Pack: U

230 VAC 50 Hz 125-425 VDC LFP 11.5 kWh 51.2 VDC 100 A 90% 1, 2 or 3 7" LCD touch screen -10° to 40° C 5% to 95% Cell: UL1642 Pack: UL1973 IEC62619:2017 System: IEC 62109-1 & IEC62109-2 AS/NZS 60950.1 AS4777-2.2015

#### MISCELLANEOUS

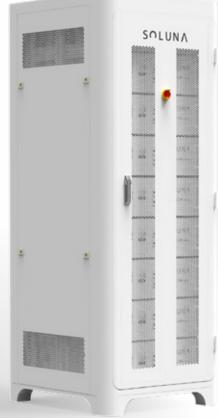
Installation	
Weight	
Dimensions (H x W x D)	
Warranty	

Floor install indoors 120 kg (not including battery/s) 1335 x 750 x 565 mm 10-year standard warranty\*

\* NB: 2-year warranty for LCD touch screen, 5-year warranty for circuit breakers.



TECHNICAL SPECS



NB: Draft specifications only; formal specs to be revised on shipment to Australia.

#### INVERTER

DC power	65 kW
AC power	50 kW
Grid type	3-phase + 4-wire
AC frequency	60 Hz
Battery charge/discharge voltage	200-750 V
Nominal AC output power	50 kVA (55 kVA max.)
AC output PF	Listed: 0.8-1 leading or lagging (load depend)
	Actual: 0.1-1 leading or lagging (load depend)
Overload capability	105% to 115% (10 minutes)
	115% to 125% (1 minute)
	125% to 150% (200 milliseconds)

### BATTERY

Battery type	LFP
Capacity	100 kWh
Depth of discharge	TBC
Nominal voltage	400
Max. charge/discharge current	150 A
Cycle life	6000

#### REGULAR

Cooling	Forced air-cooling with replaceable fan module
Noise	<65 dB
Enclosure	IP20
Installation	Indoors
Operating temperature	-20° C to 60° C (derating over 45° C)
Humidity	5% to 95% (no condensing)
Max. elevation	3000 m (> 2000 m derating)
Dimensions (H $\times$ W $\times$ D)	1960 x 600 x 800 mm

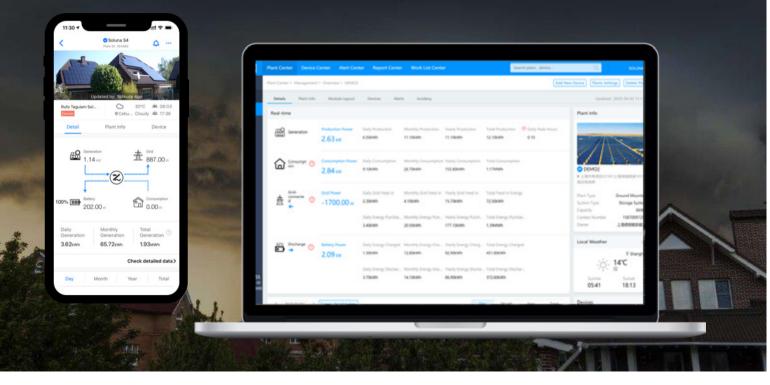
# INDEPENDENCE

SOLUNA.

POWER DESIGNED TO SET YOU FREE

## MONITORING

Soluna's online monitoring portal puts the power in your hands. View your energy consumption, generation and battery usage – all in one location.





## HOME STORAGE SYSTEM SPECIFICATIONS

Inverter-PV input	S4 EU-A36	S8 EU-A50	S12 EU-A50
Max. recommended DC power (kW)	4.68	6.5	6.5
Max. DC voltage (V)	500	500	500
Nominal DC operating voltage (V)	360	360	360
MPPT voltage range (V)	125-425	125-425	125-425
Max. input current MPPT (A)	11	11/11	11/11
Max. short current (A)	16	16	16
Number of MPPT trackers	1	2	2
Strings per MPPT tracker	1	1/1	1/1
Efficiency (%)	97	97	97
Inverter-AC input & output			
Max. continuous power (kW)	3.6	5.0	5.0
Max. AC output current (A)	18	25	25
Max. AC input current (A)	18	25	25
Max. AC protection current (A)	18	18	18
Nominal AC voltage (VAC)	230; single-phase (L/N/PE)	230; single-phase (L/N/PE)	230; single-phase (L/N/PE)
Frequency (Hz)	50	50	50
Power factor range	-0.8 to +0.8	-0.8 to +0.8	-0.8 to +0.8
Back-up & off-grid AC output			
Max. AC power (W)	3.6	5.0	5.0
Off-grid AC rated voltage (V)	220/230/240	220/230/240	220/230/240
AC nominal current (A)	18	20	20
Frequency (Hz)	50	50	50
Max. AC short current (A)	18	25	25
Switching time (milliseconds)	20	20	20
Peak power (off-grid)/time (%/second)	150/10	150/10	150/10
Back current (A)	0	0	0
Grid type	Single-phase (L/N/PE)	Single-phase (L/N/PE)	Single-phase (L/N/PE)

## HOME STORAGE SYSTEM SPECIFICATIONS

Battery data	S4 EU-A36	S8 EU-A50	S12 EU-A50	
Battery type	Lithium (LFP)	Lithium (LFP)	Lithium (LFP)	
Nominal storage capacity (kWh)	3.84	7.68	11.52	
Usable storage capacity (kWh)	3.46	6.91	10.37	
Battery capacity (Ah)	75	150	225	
Nominal voltage (V)	51.2	51.2	51.2	
Voltage range (V)	42-58	42-58	42-58	
Max. charge current (A)	50	100	100	
Max. discharge current (A)	50	100	100	
Depth of discharge (DoD)(%)	90	90	90	
Cycle life	6000	6000	6000	
Regular parameters				
Dimensions (H x W x D) (mm)	1230 x 700 x 340	1335 x 750 x 565	1335 x 750 x 565	
Weight (kg)	85 (not including battery)	120 (not including battery/s)	120 (not including battery/s)	
Display	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	
Communication	CAN-WIFI	CAN-WIFI	CAN-WIFI	
Operating temperature range (° C)	-10 to +40	-10 to +40	-10 to +40	
Storage stability range (° C)	-20 to +60	-20 to +60	-20 to +60	
Relative humidity (%)	5 to 95	5 to 95	5 to 95	
Altitude (m)	<2000	<2000	<2000	
Cooling method	Forced airflow	Forced airflow	Forced airflow	
Degree of protection	IP20 (+ optional external enclosure)	IP20 (+ optional external enclosure)	IP20 (+ optional external enclosure)	
Warranty	10 years*	10 years*	10 years*	
	* NB: 2-year warranty for LCD touch screen, 5-yea	* NB: 2-year warranty for LCD touch screen, 5-year warranty for circuit breakers.		

#### CERTIFICATIONS

AS/NZS 4777.2: 2015 IEC 62109-2: 2011 IEC 62109-1: 2010 IEC 62619: 2017 UL1973 AS/NZS 60950.1: 2015

#### **RECOMMENDED GENERATORS**

Please check relevant manual for guide to recommended generators.

## **POWER CELL SYSTEM SPECIFICATIONS\***

PV input		Battery da
Max. DC power (kW)	65	Battery typ
Max. DC voltage (V)	900	Nominal st
MPPT voltage range (V)	520-800	Usable sto
Max. input current (A)	100	Battery ca
Number of MPPT trackers	1	Nominal v
AC output		Voltage ra
AC nominal power (KW)	50	Max. charg
Max. AC current (A)	72	Max. disch
Max. AC short circuit current (A)	72	Depth of d
Max. AC protection current (A)	72	Cycle life
Nominal AC voltage/range (VAC)	400V, 3-phase (L1/L2/L3/N/PE)	Regular pa
Grid frequency/range (Hz)	50/60 (+-2.5 Hz)	Dimensior
Power factor (rated power)	-1 to +1	Weight (kg
Displacement power factor	/	Display
Grid type	Three-phase (3P+PE/3P+N+PE)	Communi
Off-grid AC output		Operating
Max. AC power (kW)	50	Storage st
Off-grid AC rated voltage (V)	400	Relative h
AC nominal current (A)	72	Altitude (n
Frequency (Hz)	50/60 (+-2.5)	Cooling m
Max. AC short circuit current (A)	/	Degree of
Switching time (milliseconds)	/	Certificate
Total harmonic distortion (THD)(%)	<3	Warranty
Peak power (off-grid) (time)	/	
Back current (A)	/	
Grid type	Three-phase (3P+PE/3P+N+PE)	

Battery data	
Battery type	Lithium (LFP)
Nominal storage capacity (kWh)	100
Usable storage capacity (kWh)	80
Battery capacity (Ah)	271
Nominal voltage (V)	384
Voltage range (V)	336-432
Max. charge current (A)	110
Max. discharge current (A)	110
Depth of discharge (DoD) (%)	80
Cycle life	6000
Regular parameters	
Dimensions (H x W x D)	TBA
Weight (kg)	TBA
Display	Touch screen
Communication	RS485, CAN-WiFi, ethernet
Operating temperature range (° C)	-10 to +50
Storage stability range (° C)	-20 to +60
Relative humidity (%)	5 to 95
Altitude (m)	< 3000
Cooling methods	Forced cooling
Degree of protection	IP20
Certificates	TBA
Warranty	10 years**

\* Specifications subject to change pending final approvals.
\*\* NB: 2-year warranty for LCD touch screen, 5-year warranty for circuit breakers.



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