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THE NEW SINGLE-PHASE HYBRID FAMILY

NEW GENERATION ESS



SIMPLIFIED AND COST-EFFECTIVE

SHRL supports direct CT connection. Beyond that simply use a Smart Meter DTSU666-20 with 333 mV CT.



NEXT GENERATION TECHNOLOGY

The SBL060 is a next-gen low-voltage LiFePO₄ battery with an integrated DC/DC converter, enabling independent modules and expandable capacity over time.



FUTURE-PROOF FLEXIBILITY

Each SBL module has its own DC/DC converter, allowing independent operation and easy addition of batteries anytime without mismatch or reconfiguration.

LOGISTICS

SHRL & SBL

Article Numbers SHRL	SH5RL: A0SH1041 SH6RL: A0SH1034 SH8RL: A0SH1042 SH10RL: A0SH1044
Single Package Weight	22 kg
Single package dimension	594 mm × 544 mm × 332 mm
Quantity per pallet	12 pcs (3 layers×4 pcs)
Weight per pallet	284 kg
Pallet size	1200 mm × 1100 mm × 1122 mm
Article Number SBL060	A0S01002
Single Package Weight	Gross: 60 kg ± 3 kg
Single package dimension	724 mm × 559 mm × 333 mm
Quantity per pallet	4 pcs (2 Layers × 2 pcs)
Weight per pallet	Gross: 256 kg ± 13 kg
Pallet size	1131 mm × 737 mm × 820 mm

1

What is the main advantage of the direct CT connection in the SHRL series?

The SHRL series allows direct CT connection, which helps eliminating the need for an external energy meter and enabling plug-and-play installation, saving space, reducing costs, and speeding up.

2

How does the SBL060 battery differ from traditional lead-acid systems?

The SBL060 battery uses next-generation low-voltage LiFePO₄ cells with integrated DC/DC converters, offering a longer lifespan, higher usable capacity, maintenance-free operation, and eliminating the “bucket effect” seen in lead-acid systems.

3

Can new batteries be added to the system after several years?

Yes, thanks to each SBL module having its own DC/DC converter, new batteries can be added at any time without mismatch or reconfiguration, ensuring seamless scalability and consistent performance.

4

How does the SHRL inverter perform with large-format PV modules?

The SHRL inverter delivers full rated power even at low DC voltage, with a wide MPPT range and high current input, making it ideal for large-format, high-current PV modules such as 182 mm and 210 mm panels.

5

What are the key differences between SHRL & SBL and previous SHRS & SBS models?

SHRL & SBL support higher PV input power, higher input current per MPPT, faster backup switch time (<4 ms), and deliver full power with fewer batteries, offering more flexibility and reliability compared to SHRS & SBS.

6

Does the SHRL inverter support whole-home backup?

Yes, the SHRL inverter provides whole-home backup capability with 40A continuous current, ultra-fast 4 ms transfer time, and can handle 200% peak power for 10 seconds, ensuring uninterrupted power during grid outages.

7

What safety features are included in the SBL battery?

The SBL battery features a triple-layer safety matrix, including structural protection, system protection, and active protection with built-in fire suppression, real-time thermal monitoring, and active pressure relief.

8

Can the system operate efficiently in extreme climates?

Yes, the SBL battery includes a heating function for safe charging at –20°C and meets IP65 + C5 standards for dust, water, and corrosion protection, ensuring reliable performance in both cold and hot climates.

MORE HARD FACTS

Type designation	SH5RL	SH6RL
Input (DC)		
Recommended max. PV input power	10000 Wp	12000 Wp
Max. usable PV input power	8000 Wp	9600 Wp
Max. PV input voltage	500 V	
Min. PV input voltage / Startup input voltage	40 V / 50 V	
Rated PV input voltage	360 V	
MPPT operating voltage range****	40 V - 425 V	
No. of independent MPP trackers	2	
No. of PV strings per MPPT	1 / 1	
Max. PV input current	40 A (20 A / 20 A)	
Max. DC short-circuit current	50 A (25 A / 25 A)	
Max. current for input connector	25 A	
Battery data		
Battery type	Li-ion battery	
Battery voltage range	40 V – 60 V	
Max. charge / discharge current*****	120 A / 120 A	135 A / 135 A
Max. charge / discharge power	5000 W / 5000 W	6000 W / 6000 W
Input / Output (AC)		
Max. AC power from grid	8800 W	
Rated AC output power	5000 W	6000 W
Max. AC output apparent power	5000 VA	6000 VA
Max. AC output current	22.7 A	27.3 A
Rated AC voltage	220 V / 230 V / 240 V	
AC voltage range	154 V – 276 V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz	
Harmonic (THD)	< 3% (of rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power / 0.8 leading to 0.8 lagging	
Feed-in phases / Connection phases	1 / 1	
Backup data (on grid mode)		
Max. output power for backup load *****	8800 W	
Max. output current for backup load	40 A	
Backup data (off-grid mode)		
Rated voltage	220 V / 230 V / 240 V	
Rated frequency	50 Hz / 60 Hz	
THDV (@ Linear load)	< 2%	
Backup switch time	≤ 4 ms	
Rated output power	5000 W	6000 W
Max. output power for backup load	5500 W	6600 W
Peak output power	2 times of rated power, 10 s	
Efficiency		
Max. efficiency / European efficiency	97.2% / 96.2%	
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
Surge protection	DC Type II / AC Type II	
PID Zero	Yes	
Arc fault circuit interrupter (AFCI)	Yes	
Micro-inverter compatibility*****	Optional	
General data		
Topology (Inverter)	Non-isolated	
Topology (Battery BDC)	Isolated	
Degree of protection	IP65	
Dimensions (W * H * D)	532 mm * 386 mm * 210 mm	
Weight	< 19 kg	
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 °C to 60 °C	
Allowable relative humidity range	0% – 95%	
Cooling method	Natural convection	
Max. operating altitude	3000 m	
Noise (typical)	≤ 35 dB (A)	
Display	LED	
Communication	CAN, RS485, Ethernet, WLAN	
DI / DO	DI *1 / DO *1	
DC connection type	MC4 (Max.6 mm ²)	
Battery connection type	OT terminal (35 mm ²)	
AC connection type	Plug and Play (Max. 8 AWG)	
Grid compliance	IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 63027, IEC 62116, IEC 61727, EN 50549, VDE-AR-N 4105, G99, UNE, NTS, CEI 0-21, NRS 097-2-1	

Type designation		SBL060
System data		
Battery type		LiFePO4
Nominal energy		6.0 kWh
Usable energy		5.8 kWh
Nominal voltage		51.2 V
Recommended charging/discharging power		3.0 kW / 2.9 kW
Peak charging/discharging power*****		3.75 kW / 3.7 kW
Communication		
Display		LED
Communication interface		CAN
Protection		
Over / under voltage protection		Yes
Over current protection		Yes
Over / under temperature protection		Yes
Reverse connection protection		Yes
DC breaker		Yes
General data		
Dimensions (W * H * D)		650 mm * 490 mm * 225 mm
Weight		≤ 55 kg
Degree of protection		IP65
Mounting method		Wall-mounting bracket / Floor-standing bracket
Installation location		Indoor / Outdoor
Operating ambient temperature range		Charge / Discharge: -20 °C to 55°C
Allowable relative humidity range		5% – 95%
Cooling method		Natural convection
Scalability		4 in parallel
Certification		CE, CEC, IEC 62619, IEC 62040, UN 38.3, IEC 63056, IEC 62477

* Available in typical conditions

** EV charger is only available when configured with iHomeManager

*** Available in Q1 2026

**** Please refer to the user manual for the full load MPPT voltage range

*****The system's charging and discharging capability is also limited by the battery's charging and discharging performance

*****Please refer to the user manual and modify the settings based on actual load power

*****For micro-inverter compatibility, it is only available for the grid-connection port of the inverter

*****Peak charging/discharging power with a duration of 10 s