

AC Battery

ACB-0.9 / ACB-1.8

Modular Storage Unit

The ACB is a smart AC battery that is part of the Solarnative Smart Energy Home system. The modular storage system with a variable number of independent batteries provides full off-grid back-up capability.



Key Features



Modular system

Freely configurable 1-phase or 3-phase system with 0.9 to 32.4 kWh
Flexible spatial arrangement – fits everywhere



Safe by design and built to last

Unique single-cell high-frequency technology controls each battery cell individually
No cell mismatch – avoids overheating and ensures maximum lifetime



Superior efficiency range

Smart and modular charging/discharging power from 375 W to 13.5 kW
Highest efficiency even at low power consumption



Full back-up capability

Provides full 3-phase back-up and off-grid functionality
Gridforming



Easy installation

No data cables
Plug & Play over-the-air commissioning
Lightweight

System Configuration

The ACB is available in two versions: ACB-0.9 and ACB-1.8. Each ACB is an AC-battery including its own independent bidirectional inverter.

The batteries can be combined to form up to 4.6 kW (20 A) charging/discharging power per phase. They can be stacked and clicked together laterally. Thanks to the flexible arrangement, the battery fits into every corner or niche.

Each battery system requires one battery control unit (BCU) that provides the control interface for the connected ACBs. The BCU controls the ACBs via powerline communication. The BCU is integrated into the Solarnative Smart Energy Home system via LoRa wireless communication.

Within the Smart Energy Home, a Smart Gateway SGW-1 is required to manage the complete system. A Smart Power Meter SPM-63 is required to measure the power at the grid connection point.

Technical Data

Battery	ACB-0.9	ACB-1.8
Battery cell chemistry	Lithium Iron Phosphate (LiFePo), cobalt-free	
Usable Energy	0.9 kWh	1.8 kWh
Nominal voltage	230 V @ 50 Hz / 240 V @ 60 Hz	

Output (AC)	ACB-0.9	ACB-1.8
Continuous charging / discharging power (at 240 V)	375 W	750 W
Round trip efficiency	> 85 %	
Nominal voltage	230 V @ 50 Hz / 240 V @ 60 Hz	
Current	Max 1.6 A	
Overvoltage Class	II	
Nominal frequency	50-60 Hz	

System	ACB-0.9	ACB-1.8
Maximum number of ACB modules per phase (3-phase)	12 (36)	6 (18)
Maximum charging/discharging power per phase (3-phase)	4.6 kW (13.5 kW)	
Maximum current per phase	20 A (self-limiting)	
Maximum usable storage capacity per phase (3-phase)	10.8 kWh (32.4 kWh)	

Communication	ACB-0.9	ACB-1.8
Communication with BCU battery control unit	Powerline communication	
Communication from BCU to Smart Gateway SGW-1	LoRa WAN wireless	
Commissioning	Via mobile app	

General Data	ACB-0.9	ACB-1.8
Dimensions (length x width x height)	125 mm x 200 mm x 250 mm (4.9 in x 7.9 in x 9.8 in)	250 mm x 200 mm x 250 mm (9.8 in x 7.9 in x 9.8 in)
Weight	7 kg (247 oz)	14 kg (494 oz)
Cooling	Natural convection	
Ingress protection	IP55	
Noise emission	< 40 dB	