

AC Battery ACB-0.9 and ACB-1.8



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

Key features



Modular system

Freely configurable 1-phase or 3-phase system with 0.9-32.4 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 models ACB-0.9 and ACB-1.8.

Each ACB is an AC-battery including its own independent bidirectional inverter.

The building blocks can be arranged in different ways. They can be stacked and clicked together laterally. Therewith, the battery fits into every corner or niche.

The battery modules can freely be combined with up to 4.6 kW (20 A) charging / discharging power per phase.

Each battery system has one battery control unit (BCU) that provides the control interface to the ACBs connected to it. The BCU controls the ACBs via powerline communication.

Via LoRa wireless communication, the BCU is integrated into the Smart Energy Home system.

Within the Smart Energy Home, a SGW-1 smart gateway is required to control the complete system and 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
roundtrip 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)	
Max. 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 SGW 1 gateway		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