

# AEG



## RESIDENTIAL ALL-IN-ONE ENERGY STORAGE SYSTEM AS-BSH07 SERIES

### CHARACTERISTICS

All-in-one: Inverter + High voltage battery system  
Battery rated energy: 5.0kWh - 30.0kWh  
Inverter power classes: 4.0kW - 15.0kW  
Three-phase, 2 MPPT, High voltage  
Product Name Code (PNC): AS-BSH07C-4.0K-2 |  
AS-BSH07C-5.0K-2 | AS-BSH07C-6.0K-2 |  
AS-BSH07C-8.0K-2 | AS-BSH07C-10.0K-2 |  
AS-BSH07C-12.0K-2 | AS-BSH07C-15.0K-2



**EXTRA PEACE OF MIND:  
12/ 10 YEARS PRODUCT WARRANTY  
(INVERTER/ BATTERY)**

For the full warranty terms see: [www.aeg-solar.com](http://www.aeg-solar.com)

### ADVANTAGES

#### FLEXIBLE

- Low start-up voltage for longer operation
- 200% oversizing and 200% PV input power
- Max. 20A DC input current for solar panel
- Max. 50A charge / discharge current
- Wireless meter compatibility

#### RELIABLE

- IP66 rated ingress protection
- Type II SPD on AC&DC side
- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms
- Micro-grid support for real-time grid/off-grid balancing

#### USER-FRIENDLY

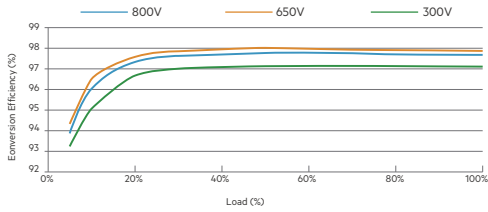
- Global MPP scan for optimal energy harvest
- Smart loads management
- AI ready, forecasting solar generation and home consumption for smart energy management strategy control
- Cycle life > 6000 cycles
- AFCI protection (optional)

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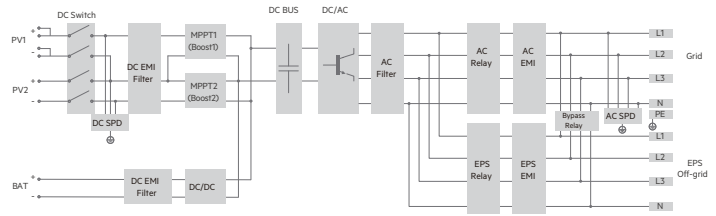
## System Configuration



## Efficiency Curve



## Circuit Diagram



Rated power	4 kW / 5 kW / 6 kW / 8 kW / 10 kW / 12 kW / 15 kW					
Number of batteries	1	2	3	4	5	6
Rated energy <sup>1</sup>	5.1 kWh	10.2 kWh	15.3 kWh	20.4 kWh	25.6 kWh	30.7 kWh
Usable energy <sup>2</sup>	4.6 kWh	9.2 kWh	13.8 kWh	18.4 kWh	23.0 kWh	27.6 kWh
Max. power <sup>3</sup>	5.1 kW	10.2 kW	15.0 kW	15.0 kW	15.0 kW	15.0 kW
Ingress protection	IP66					
Operation temperature range	-30 ~ 53°C					
Relative humidity	4 ~ 100% (Condensing)					
Max. operation altitude	3000 m					
Net weight <sup>4</sup>	97.2 kg	144.2 kg	191.2 kg	238.2 kg	144.2 kg / 146.2 kg	191.2 kg / 146.2 kg
Dimensions (W x H x D)	730 × 963 × 209.5 mm	730 × 1281 × 209.5 mm	730 × 1599 × 209.5 mm	730 × 1917 × 209.5 mm	730 × 1281 × 209.5 mm / 730 × 1120.5 × 150 mm	730 × 1599 × 209.5 mm / 730 × 1120.5 × 150 mm
Display	LCD					
Cooling concept	Natural cooling					
Topology	Non-isolated					
Communication interface	RS485, Pocket-X, USB, CAN, DO, DI					

1. Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
2. System usable energy may vary with inverter different setting
3. The max.charge/discharge power must not exceed the rated output power (the table takes the maximum power inverter as an example)
4. Different inverter have different weights. The heaviest one is taken as example

PV INPUT							
Max. recommended PV array power	8 kWp	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage <sup>1</sup>	1000 V						
Rated PV input voltage	600 V						
Operation voltage range	90 ~ 950 V						
MPPT voltage range <sup>2</sup>	110 ~ 950 V						
Start-up voltage	140 V						
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)			2 / (2 / 1)			
Max. input current per MPPT	20 A / 20 A			32 A / 20 A			
Max. input short circuit current per MPPT	25 A / 25 A			40 A / 25 A			
AC INPUT & OUTPUT (ON-GRID)							
Rated output power	4000 VA	5000 VA	6000 VA	8000 VA	10000 VA	12000 VA	15000 VA
Rated output current	5.8 A	7.3 A	8.7 A	11.6 A	14.5 A	17.4 A	21.8 A
Max. output apparent power	4000 VA	5500 VA	6600 VA	8800 VA	10000 VA	13200 VA	16500 VA
Max. output continuous current	5.8 A	8.0 A	9.6 A	12.8 A	14.5 A	19.2 A	24.0 A
Rated AC voltage	3 W / N / PE, 220 / 380 V 3 W / N / PE, 230 / 400 V						
Max. AC input apparent power	10 kVA	10 kVA	12 kVA	16 kVA	20 kVA	20 kVA	20 kVA
Max. AC input current	16.1 A	16.1 A	19.3 A	25.8 A	32.0 A	32.0 A	32.0 A
Rated AC frequency	50 Hz / 60 Hz						
AC frequency range <sup>3</sup>	50 ± 5 Hz / 60 ± 5 Hz						
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)						
THDi (rated power)	< 3%						
BATTERY							
Operation voltage range	80 ~ 800 V						
Communication interfaces	CAN / RS485						
BMS module	AS-BMH07-CM						
Battery module	AS-BMH07-5.1K						
Composition	AS-BMH07-CM + AS-BMH07-5.1K x (2 ~ 6 stacks) + Base plate + AS-BAC07 (Required for two columns)						
Battery type	Li-ion (LFP)						
Rated capacity / rated capacity <sup>4</sup>	5.1 kWh / 50 Ah						
Usable energy <sup>5</sup>	4.6 kWh						
Rated power	3 kW						
Max. power	5.1 kW						
Max. charge / discharge current <sup>6</sup>	50 A						
Cycle life	> 6000 cycles						
Warranty	10 years						
Certifications	CE, TUV (IEC62619), RoHS, REACH						
AS-BMH07-CM dimensions (W x H x D) / net weight	730 x 165 x 150 mm / 9.3 kg						
AS-BMH07-5.1 dimensions (W x H x D) / net weight	730 x 318 x 150 mm / 47 kg						
Base plate (W x H x D) / net weight	730 x 75 x 150 mm / 3.9 kg						
AS-BAC07 (W x H x D) / net weight	167 x 91.5 x 121 mm / 1.3 kg						

EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz						
Rated EPS output power	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10s						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operation temperature range	-35 ~ 60°C (> 45°C derating)						
Max. Operation altitude	3000 m						
Relative humidity	4~ 100% RH (condensing)						
Overtoltage category	Mains: III, Battery: II, PV: II						
GENERAL							
Dimensions (W × H × D)	717 × 405 × 209.5 mm						
Net weight	35 kg				37 kg		
Cooling concept	Natural cooling						
Communication interfaces	RS485, Pocket-X, CAN, DO, DI						
Power consumption (night)	< 40 W for hot standby, < 5 W for cold standby						
Topology	Non-isolated						
Certifications	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / EN50549 / CEI 0-21						
PROTECTION							
Protections	Over voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current monitoring						
Surge protection	DC: Type II, AC: Type II						
Arc-fault circuit interrupter (AFCI)	Optional						

1. The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter
2. Input voltage exceeding the MPPT voltage range may trigger inverter protection
3. The AC frequency range may vary from different country codes
4. Test conditions: 25°C, 100% depth of discharge (DoD), 0.2C charge & discharge
5. System usable energy may vary with inverter different settings
6. Discharge: In case of the battery cell's temperature range of -20°C-10°C and 45°C-53°C, the discharge current will be reduced; Charge: In case of the battery cell's temperature range of 0°C-25°C and 45°C-53°C, the charge current will be reduced. Product charge or discharge power depends on the actual temperature of the battery pack

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