



QUICK INSTALLATION GUIDE FOR THE

AS-BSH07 SERIES

(RESIDENTIAL ALL-IN-ONE ENERGY STORAGE SYSTEM:

AS-BSH07C-4.0K-3 | AS-BSH07C-5.0K-3 | AS-BSH07C-6.0K-3 |

AS-BSH07C-8.0K-3 | AS-BSH07C-10.0K-3 | AS-BSH07C-12.0K-3 |

AS-BSH07C-15.0K-3)

**AEG QUICK INSTALLATION GUIDE- SERIES AS-BSH07
VERSION: PD202603 V1.1-26 EN**

Thank you for choosing the reliability of AEG stackable all-in-one energy storage system. AEG products are tested and approved by acknowledged independent certification authorities and can only be installed by qualified professional companies.

- Note:**
1. In the case of no more than 3 (including 3) battery modules in a tower, please ensure that the bearing capacity of the supporting surface for the system must be over 940 kg.
 2. In the case of 4 battery modules in a tower, please ensure the bearing capacity of the supporting surface

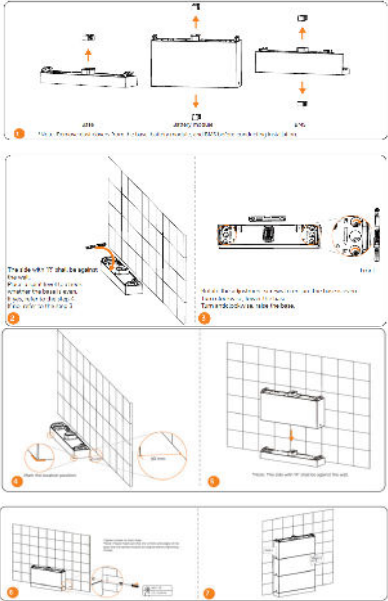
- for the system must be over 1090 kg.
3. The devices must not be installed on the wood wall.
4. Please ensure that the thickness of any part of the wall should not be less than 150 mm if the wall mounting is selected.
5. At least two persons are required to move the devices of AS-BSH07C-3 system.
6. Please reserve enough distance from the device to the ceiling (or the grounding) for capacity expansion.

Floor Mounting

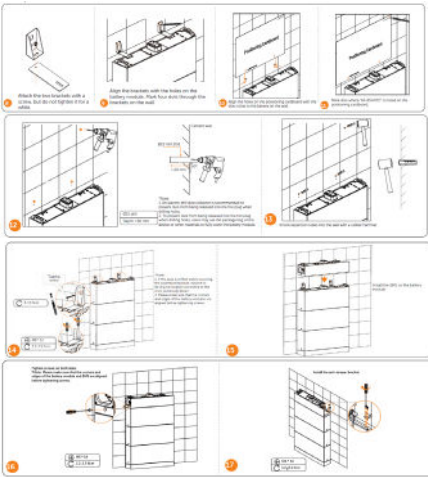
The mode of floor mounting is given priority for installation. Option B (three battery modules in one tower) is taken as an example.

One Tower

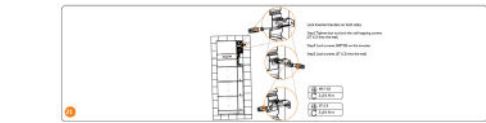
Step 1 Prepare and install the battery base and battery modules.



Step 2 Install the BMS.



Step 3 Install the inverter



Two Towers

Take the installation procedure for six battery modules as an example.



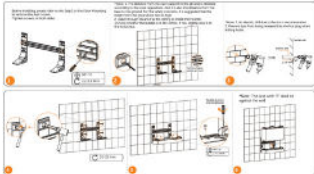
*Note: The cover that covers on the series box shall be installed after finishing wiring. As for the installation procedure of the cover, please refer to the section of "Installation of Cover".

Wall Mounting

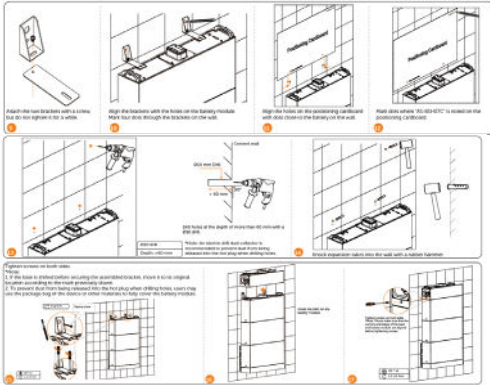
The installation option B with three battery modules is taken as an example.

One Tower

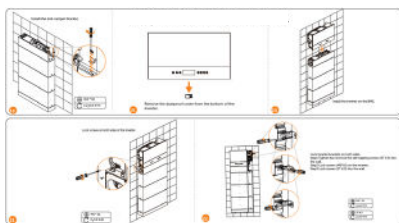
Step 1 Prepare and install the base support and battery modules.



Step 2 Install the BMS

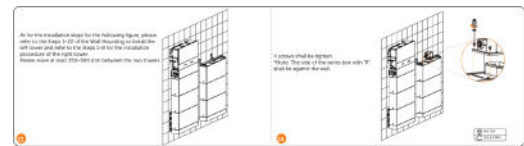


Step 3 Install the Inverter



Two Towers

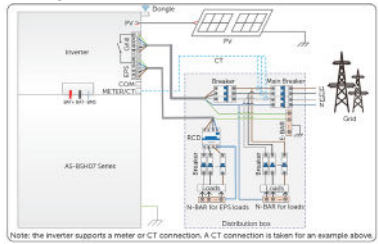
Take the installation procedure for six battery modules as an example.



*Note: The cover that covers on the series box shall be installed after finishing wiring. As for the installation procedure of the cover, please refer to the section of "Installation of Cover".

Electrical Connection

System diagram



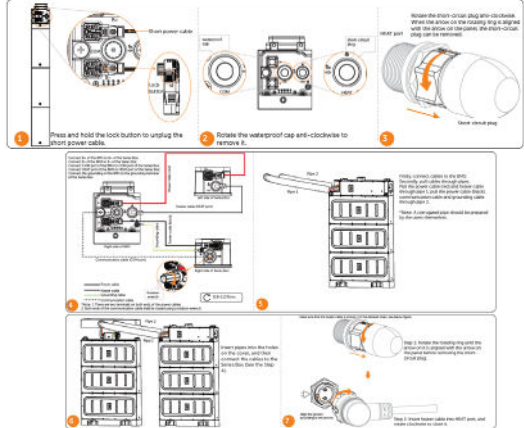
Wiring Connection on the Battery

Wiring

*Note: In the case of one tower, the BMS does not need to conduct wiring. The short power cable, short-circuit plug, and waterproof cap will be connected before delivery. And in that case, please don't remove the short power cable, short-circuit plug, or waterproof cap.

Wiring procedure for two towers

Before conducting wiring between the BMS and series box, the short power cable, short-circuit plug, and waterproof cap shall be removed.



*Note:

1. Tighten both ends of the communication cable with a rotation wrench. After tightening, remove the rotation wrench.
2. Don't violently remove the cable when it is locked.
3. A corrugated pipe with an external diameter of 67.2 mm is recommended for use to keep cable insulation in place and avoid potential damages.

Installation of Cover

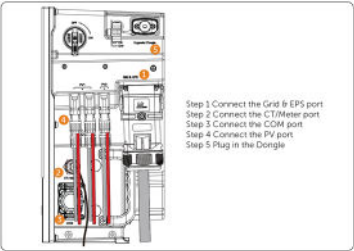
After finishing wiring, please install the cover according to the following steps.



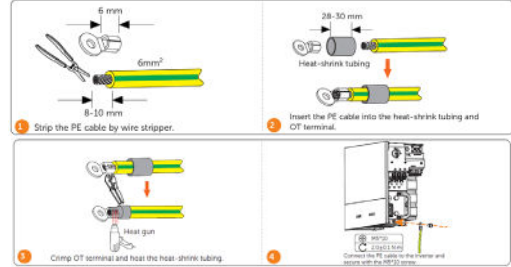
*Note: The above step for installing the cover also applies to the mode of wall mounting.

Wiring Connection on the Inverter

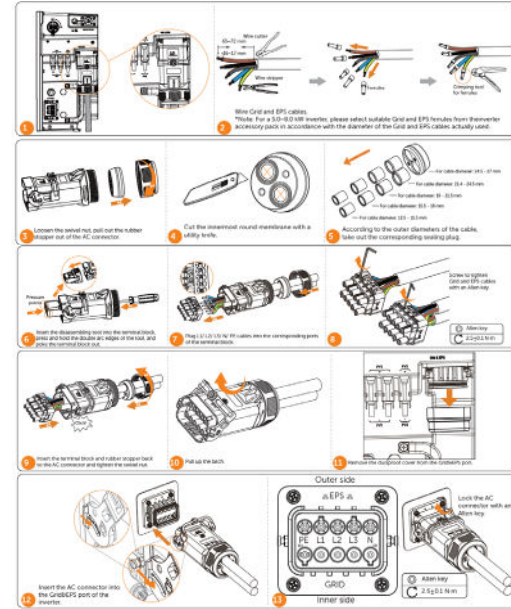
Wiring Sequence



PE connection



Grid and EPS (Off-grid) Connection

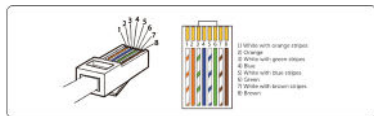


Communication Connection

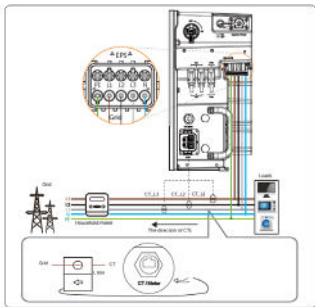
CT/Meter Port Introduction

1. Pin definition for CT/meter

Item	CT			Meter			CT		
Pin	1	2	3	4	5	6	7	8	
Pin definition	CT_ L1-1	CT_ L2-1	CT_ L3-1	METER 485A	METER 485B	CT_ L1-2	CT_ L2-2	CT_ L3-2	



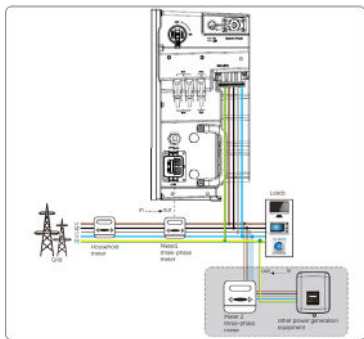
2. CT connection diagram



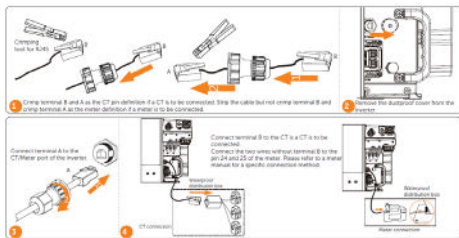
- * The arrow on the CT must point at the grid.
- * Markings on the CTs might be R, S and T or L1, L2 and L3. Make sure to clip CT-R/CT-L1 to the L1 wire, CT-S/CT-L2 to the L2 wire, and CT-T/CT-L3 to the L3 wire.

3. Meter connection diagram

If the user has other power generation equipment (such as an inverter) at home and wants to monitor both devices, our inverter provides a meter 2 communication function to achieve power monitoring.

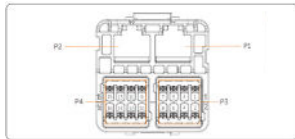


4. CT/Meter cable connection steps



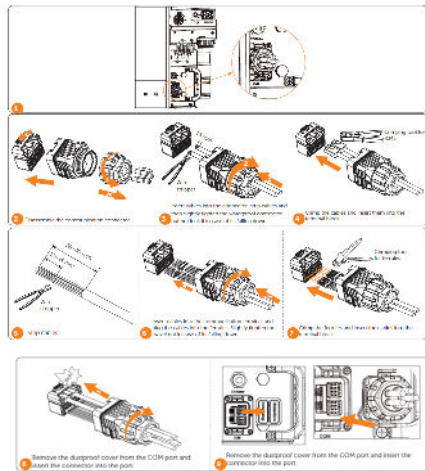
COM Port Connection

1. COM port introduction

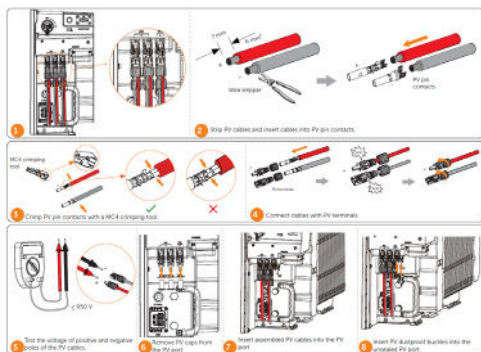


Icon	PIN	Definition	Function	Comment
P1	1	PARALLE_ SYNC1	Parallel signal output	
	2	PARALLE_ SYNC2		
	3	EPSBOX_ RELAY_VCC		
	4	PARALLE485A		
	5	PARALLE485B		
	6	GND_COM		
	7	CAN_L		
	8	CAN_H		Parallel signal port (RJ45)
P2	1	PARALLE_ SYNC1	Parallel signal input	
	2	PARALLE_ SYNC2		
	3	N/A		
	4	PARALLE485A		
	5	PARALLE485B		
	6	GND_COM		
	7	CAN_L		
	8	CAN_H		
P3	1	DRM1/5	Logic interface signal	Logical interface is for Australia (AS4777) and other standards
	2	DRM2/6		
	3	DRM3/7		
	4	DRM4/8		
	5	REF GEN/O		
	6	COM/DRM0		
	7	remote 485A	RS485 differential signal-A	Communication with internal devices
	8	remote 485B	RS485 differential signal-B	
P4	9	12V_COM	12V	Energy supply
	10	GND	GND	Ground connection
	11	modbus 485A	Modbus485	485 port for communication with other external devices
	12	modbus 485B		
	13	DO_1	Output drycontact	Output drycontact
	14	DO_2		
	15	DI_1	Input drycontact	Input drycontact
	16	DI_2		

2. COM port cable connection procedures

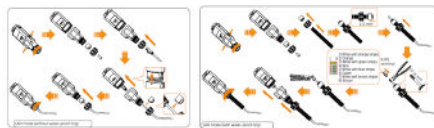


PV Connection

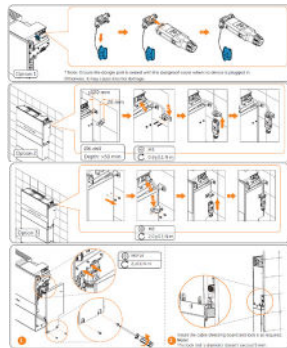


Monitoring Connection

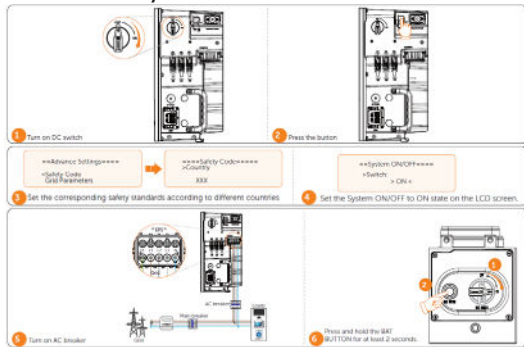
- The dongle is equipped with two kinds of communication modes (Wi-Fi or LAN). Users can choose based on actual needs.
- When choosing Wi-Fi mode, you can install Dongle directly on the inverter, when choosing LAN mode, please do following procedure to connect the network cable.



- There are three ways to install Dongle. For option 2, the installation procedure differs between the two cable shielding board versions. Please choose according to actual needs.
- The dongle in the following connection diagrams is taken as an example with Wi-Fi mode.

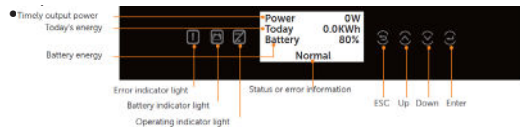


Power on the System



After the installation is complete, cut off the AC breaker between Grid terminal and the grid, and then switch on all the EPS loads to ensure that the system work properly. Repeat the above operations each time the load on the EPS terminal increases.
* Refer to user manual for more information about powering on the system.

LCD Panel

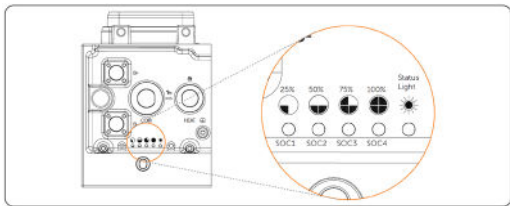


- In a normal state, the "Power", "Today" and "Battery" information will be displayed. You can press the keys to switch information.
- In an error state, the fault message and error code will be displayed, please refer to corresponding solutions in the user manual.

LED indicator	Status	Definition
	Solid blue	The inverter is in a normal status mode.
	Blue blinking	The inverter is in a waiting, checking status or the system switch is off.
	Light off	The inverter is in a fault status.
	Solid red	The inverter is in a fault status.
	Light off	The inverter is in a normal status.
	Solid green	The battery communication is in a normal state and working normally.
	Green blinking	The battery communication is in a normal state and in an idle status.
	Light off	The inverter is in a fault status.

Key	Definition
ESC key	Exit from the current interface or function
Up key	Move the cursor to the upper part or increase the value
Down key	Move the cursor to the lower part or decrease the value
Enter key	Confirm the selection

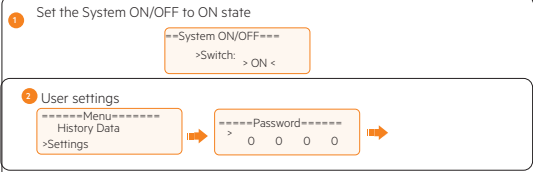
Battery



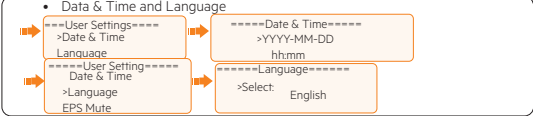
No.	Mode	Description
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1	Startup	Press and hold the BMS BUTTON for about 1 to 2 seconds to activate the system, at this point, the status light flashes a yellow light every 0.1 seconds until finishing self test, of which the period lasts about 3 to 4 seconds. Then the status light flashes green light every 0.5 seconds after finishing self test. During the whole period, all the SoC power indicators were off. After successful communication to the inverter, the status light turns solid green light, and SoC power indicators come on solid green light based on the actual remaining capacity.
2	Shutdown	After pressing and holding the BMS BUTTON for more than 1 second, the status light comes on solid green light, and the SOC power indicators flash blue in turn. Then all lights are off within 2.4 seconds after releasing the button.
3	Standby	The status light flashes green for 1 second and turns off for 4 seconds. The SOC power indicators are off.
4	Charging	The status light comes on solid green light, and the state of SOC power indicators depends on the actual situation. For details, please refer to the <i>User Manual</i> .
5	Discharging	The status light comes on solid green light, and the state of SOC power indicators depends on the actual situation. For details, please refer to the <i>User Manual</i> .
6	Fault	In case of failure, the status light will remain on solid red light for 10 minutes, and then such red light will flash for 1 second and then turn off for 4 seconds.
7	Warning	In case of warning, the status light will flash yellow light for 1 second, and then turn off for 4 seconds.

General Setting



The initial password of user setting is 0 0 0 0 which should be changed for the consideration of account security



- Battery

Configuration List

No.	Battery power module	Battery control module	Nominal Energy (kWh)	Operating Voltage (Vdc)
1	AS-BMH07-51K × 1	AS-BMH07-CM × 1	5.1	90-116
2	AS-BMH07-51K × 2	AS-BMH07-CM × 1	10.2	180-232
3	AS-BMH07-51K × 3	AS-BMH07-CM × 1	15.3	270-348
4	AS-BMH07-51K × 4	AS-BMH07-CM × 1	20.4	360-464
5	AS-BMH07-51K × 5	AS-BMH07-CM × 1	25.6	450-580
6	AS-BMH07-51K × 6	AS-BMH07-CM × 1	30.7	540-696

Performance

Model [AS-BSH07-X]	x = 51K	x = 10.2K	x = 15.3K	x = 20.4K	x = 25.6K	x = 30.7K
Nominal Voltage [Vdc]	102.4	204.8	307.2	409.6	512	614.4
Operating Voltage [Vdc]	90-116	180-232	270-348	360-464	450-580	540-696
Nominal Capacity [Ah] ¹	50	50	50	50	50	50
Nominal Energy [kWh] ¹	5.1	10.2	15.3	20.4	25.6	30.7
Usable Energy 90% DOD [kWh] ²	4.6	9.2	13.8	18.4	23.0	27.6
Max. Charge/Discharge Current [A] ³	50	50	50	50	50	50
Recommend Charge/Discharge Current [A] ⁴	30	30	30	30	30	30
Standard Power [kW]	3	6.1	9.2	12.2	15.3	18.4
Max. Power [kW]	5.1	10.2	15.3	20.4	25.6	30.7
Battery Round-trip Efficiency (0.2 C, 25°C) ⁵	95%					
Expected Lifetime (25°C)	10 years					
Cycle Life 90% DOD (25°C)	6000 cycles					
Charge Temperature	0°C ~ 53°C (Off heating function) ³ -30°C ~ 53°C (In heating function) ³					
Discharge Temperature	-20°C ~ 53°C (Off heating function) ³ -30°C ~ 53°C (In heating function) ³					
Storage Temperature	30°C ~ 50°C (6 months), -20°C ~ 30°C (12 months)					
Ingress Protection	IP66					
Protection Class	I					

*Note:

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. Discharge: In case of 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 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.
4. The battery can only be discharged and can not be charged when the battery cell's temperature range is between -20°C and 0°C.
5. Test conditions: 25°C, 100%, depth of discharge (DoD), 0.2C charge & discharge.

Fuse Parameter

Component Type	Assembled fuse
Fuse type	EV / HEV
Rated voltage (Vdc & Vac)	750
Rated current (A)	80

AEG

SOLAR SOLUTIONS AG

Riedweg 3
6418 Rothenthurm
Schweiz / Switzerland
www.aeg-solar.com
service@solarsolutions.ag

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