

 ACCUMOTIVE



Mercedes-Benz Energy Storage Home Manual

Mercedes-Benz



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1. General instructions

- Please read the whole of this manual before installing and starting to use the system.
- Please follow the safety instructions at all times.
- This manual is part of the product. Keep it safe for future use or subsequent owners.
- The rating plate and warning plates must remain attached to the product at all times.

1.1 Applicability of these instructions

These instructions apply exclusively to the Mercedes-Benz Energy Storage Home Gen.1.5 produced by Deutsche ACCUMOTIVE GmbH & Co. KG.

1.2 Correct use

The Mercedes-Benz Energy Storage Home is a compact modular energy storage system. The product is designed to optimize the self-consumption of energy and provide an alternative source of power. It can be operated using one of the inverters approved by Deutsche ACCUMOTIVE GmbH & Co. KG. Up to four energy storage modules can be connected in parallel to form a single unit. The largest possible configuration comprises two such units connected in parallel via an external distribution box. The system must be installed in compliance with the specified ambient conditions [1.3 Ambient conditions; S.4].

Use the product exclusively in accordance with the instructions given in this manual and the standards and guidelines prevailing locally. Any use contrary to these provisions and the stated operating limits is prohibited and will invalidate the warranty.

Non-compliance with the operating instructions is not permitted except with the separate, written approval of Deutsche Accumotive GmbH & Co. KG.

1.3 Ambient conditions

The Mercedes-Benz Energy Storage Home has the following installation requirements:

- Must be installed inside a building (but not in living areas).
- Install in a well-ventilated location.
- Max. height above sea level 2,000 m.
- Ambient temperature between +6 °C and +44 °C.
- Max. relative humidity 85% (non-condensing).

- The floor and wall where the energy storage module is installed must be non-flammable (cement or stone).
- Do not install in areas subject to fire or explosion hazard.
- For wall assembly, the wall should be able to bear at least four times the total weight (energy storage module incl. accessories).
- Do not install in proximity to highly flammable materials.
- The room should be separated from the rest of the building by means of an F30 fire door.
- We recommend equipping the installation zone with a smoke detector and fire extinguisher to permit early detection and extinguishing of any fires breaking out in the vicinity of the energy storage module.
- Do not install in a corrosive environment or an environment containing harmful gases (salts and ammonia).
- The building it is housed in must provide protection against direct lightning strikes.
- Must be protected from external hazards such as fire, water, tremors or vibration.
- Do not install in areas at risk of flooding.
- Must be protected against access by unauthorised persons.
- Must be protected from extreme environmental conditions such as strong sunlight, high or low temperatures and atmospheric pollution.
- Do not install close to water pipes or hoses.
- Keep away from steam produced by washing machines, driers, saunas or similar.

1.4 Target group

Users

People who use the Mercedes-Benz Energy Storage Home. They must be instructed by a trained person in how to operate the unit, handle batteries and electrical appliances and the risks involved. They must have read and understood the whole of this document and must at all times comply with every aspect of it, in particular the safety instructions.

Trained electricians

Persons possessing suitable knowledge and experience in the fields of electricity and electronics. Their professional training, experience and knowledge must enable them to comply with relevant regulations, assess work and detect potential hazards. They must have read and understood the whole of this document and must at all times comply with every aspect of it, in particular the safety instructions.

1.5 Warranty



Deutsche ACCUMOTIVE GmbH & Co. KG provides a ten-year warranty for each individual module of your energy storage system. If you would like to make a claim to this manufacturer's warranty, we would like to ask that you complete and submit the warranty card to the manufacturer as soon as your energy storage system has been installed and is ready for operation. This is a mandatory prerequisite for the manufacturer's warranty to enter into force.

The warranty card is enclosed with the Warranty Terms and Conditions. Your country-specific Warranty Terms and Conditions are available at:

www.mercedes-benz-energy.com/support

Please note that you need to send in an additional filled-in warranty card to the manufacturer for each newly purchased module for your energy storage system if you would like to extend the manufacturer's warranty to these new modules.




1.6 Signposting within the text




Text	Use	Example
[Reference; X]	Cross-reference within this document, giving the section name and page number after the semicolon	[Montage; p. 11]
 Warning!	Warnings relating to safety matters which must be complied with	 Never lean over the banister!
Information	Information which is important but not safety-related	Wash your hands before eating.
(1) • (2) (3) •	Operating instructions with a fixed sequence and outcome (•...)	(1) Press on button. • Press on button. (2) Enter username and password. (3) Select OK to confirm. • User is logged on.

1.7 Rating plate

The rating plate provides information regarding the primary technical data on your Mercedes-Benz Energy Storage Home. It is located beneath the right-hand trunking cover of the energy storage module.

Abbreviation	Meaning	Abbreviation	Meaning
SN	Serial number	Weight	Weight of an individual module
Date	Date of manufacture	HW _{Version}	Hardware status
U _N	Battery's nominal voltage	SW _{Version}	Software status
C	Battery capacity	Q _{Version}	Quality status
E	Energy content of battery		

Symbol	Name	Explanation
	CE marking	Manufacturer's declaration of conformity concerning compliance with all CE-relevant regulations.
	Consult manual	Informs you that the manual and the safety instructions it contains must be read and complied with.
	EU Batteries Act label	Warning that batteries must be collected separately and not disposed of in domestic refuse.

Symbol	Name	Explanation
	RCM label	Declaration of conformity with all EMC- relevant australian regulations.
	International recycling label	This means that batteries need to be separated from normal household waste and recycled; they cannot be disposed of with normal household waste.
	Certification by TÜV Rheinland	This means that the product has been tested by TÜV Rheinland LGA Products GmbH and fulfills the defined criteria.

2. Safety instructions

2.1 General safety instructions

Please comply with the safety instructions laid down in this chapter during all work on or with this product in order to avoid personal injury, damage to property or harm to the environment. Please read this chapter carefully and follow the safety instructions at all times!



DANGER Fire hazard

Mechanical damage to the energy storage module may cause internal or external short circuits. These lead to high compensating currents which may result in fire. In liquid or steam form the electrolyte used is highly flammable.

- Never force open the energy storage module!
- Place the module in a location where it is safe from vandalism!
- Be sure to avoid mechanical damage!
- Make sure it is not installed in areas of high fire loading or close to fire sources!
- If possible switch off your Mercedes-Benz Energy Storage Home should it suffer damage!
- In the event of a fire leave the danger zone immediately and call the fire brigade!



DANGER Arc flash hazard

If wires connected to the active system become detached, their high energy content means there is a high risk of arc flash. Arc flash poses a threat to life and limb.

- Wires must be correctly attached (maintenance-free and strain-relieved)!
- Wires may only be connected or disconnected with the power off (before starting up or after switching off)!



DANGER

Electrolyte escape hazard

The electrolyte used, **Selectilyte P-0063** (200 ml per cell), is harmful to health if it comes into contact with skin, being capable of causing severe acid burns and serious eye damage. It can also cause allergic skin reactions and cancer. It is toxic to the environment, particularly water organisms, and has long-term harmful effects.

- Contact with escaped electrolyte must be avoided at all costs!
- Leave the danger zone immediately!
- Prevent the electrolyte escaping into the environment!
- Never force open the energy storage module!
- After contact with skin or hair remove contaminated clothing immediately and wash or shower skin with copious quantities of water!
- After contact with your eyes gently rinse them in water for several minutes. If wearing contact lenses remove them and rinse them thoroughly!
- After contact, call the poison information centre or your doctor immediately!
- Suitable PPE should be worn while removing escaped electrolyte!
[2.2 Personal protective equipment (PPE); S.8]



WARNING

Falling module hazard

Energy storage modules are heavy enough to injure body parts or damage objects even if falling from a low height.

- Wear suitable protective equipment when transporting or assembling energy storage modules!
[2.2 Personal protective equipment (PPE); S.8]
- Use the handles provided when lifting and carrying the energy storage modules!
- During installation take care to follow the instructions given in this manual! [4. Installation; S.12]
- For safety reasons, any modules that have fallen cannot be reused!



CAUTION

Electrostatic discharge hazard

As a rule, electrostatic discharges do not cause harmful current surges. However, they may startle you, leading to the risk of an accident or damage to electronic equipment.

- Before touching the Mercedes-Benz Energy Storage Home during assembly or maintenance work, either earth all tools or wear ESD-appropriate protective equipment (gloves as a minimum)!
- Be aware of your surroundings!
- During installation take care to follow the instructions given in this manual! [4. Installation; S.12]



CAUTION

Lightning strike hazard

The system is not protected against the lightning strikes to be expected in outdoor areas. These could lead to damage to the energy storage module, rendering it dangerous.

- The building around the operating room must be protected against direct lightning strikes!



CAUTION

Water damage hazard

If moisture, for instance in the form of splashes, steam, condensation, etc., penetrates the housing, there is a risk of severe impairment to the system's functioning and damage to all its components.

- Only assemble and install in dry surroundings. [1.3 Ambient conditions; S.4]
- Avoid the direct penetration of moisture into the Mercedes-Benz Energy Storage Home or contact with steam from washing machines, driers, saunas or similar. (Maximum contamination level 2)!
- Never install in close proximity to walls through which water pipes or tubes pass!

2.2 Personal protective equipment (PPE)

Transport

Safety shoes (toe protection, anti-slip)

Gloves (Protection Index class 2 as a minimum, see EN 374)

Installation, maintenance and dismantling

Safety shoes (toe protection, anti-slip)

ESD gloves

Removal of electrolyte or liquid acid

Sealed safety glasses/goggles or a visor

Long-sleeved protective clothing

Acid-resistant safety shoes or rubber boots

For contact with batteries, electrical insulating gloves (according to IEC 60903, Class 0, Category R, certified according to IEC 61482-1-2, Class 2 or EN 61482-1-2, Class 2)

Where there is no battery contact, nitrile chemical protection gloves

For fire-fighting

Breathing apparatus not dependent on surrounding atmosphere

Chemical protection clothing

2.3 Room signage

Labeling

Description



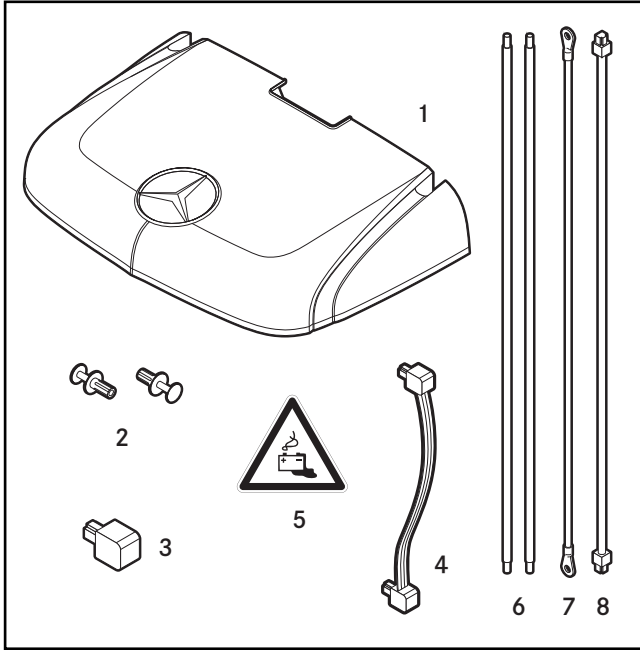
Put up the following symbol (supplied with the module) in the operating room. In the event of an incident, such as a fire, the sign will warn the emergency services that batteries are present in the room.

3. Product description

The Mercedes-Benz Energy Storage Home is a compact, modular system, which enables you to optimise your personal energy consumption. It offers a power output ranging from 2.5 kW for a single energy storage module to 20 kW for a system comprising eight energy storage modules.

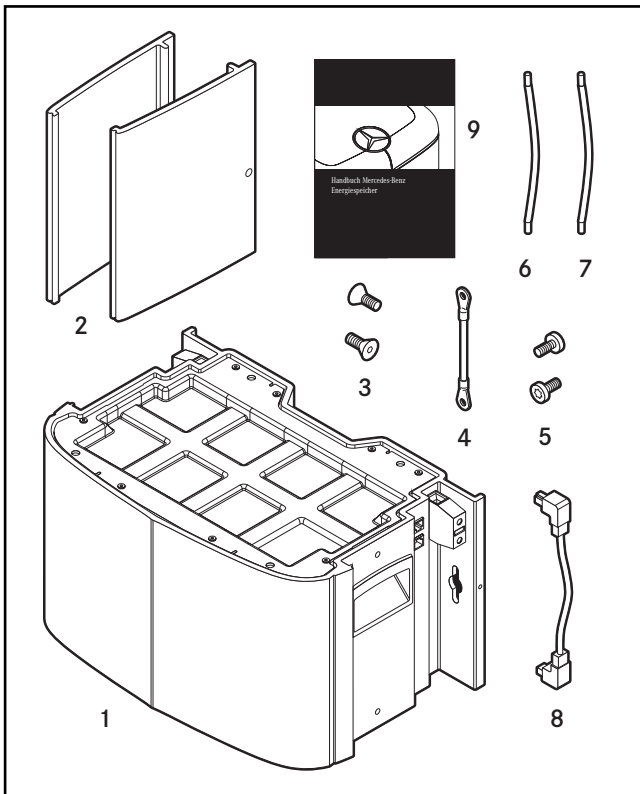
3.1 Supplied module components

The Mercedes-Benz Energy Storage Home comes with the following components. On delivery, check that all components are present and undamaged. In the event of defects or missing parts please contact your reseller or installer.



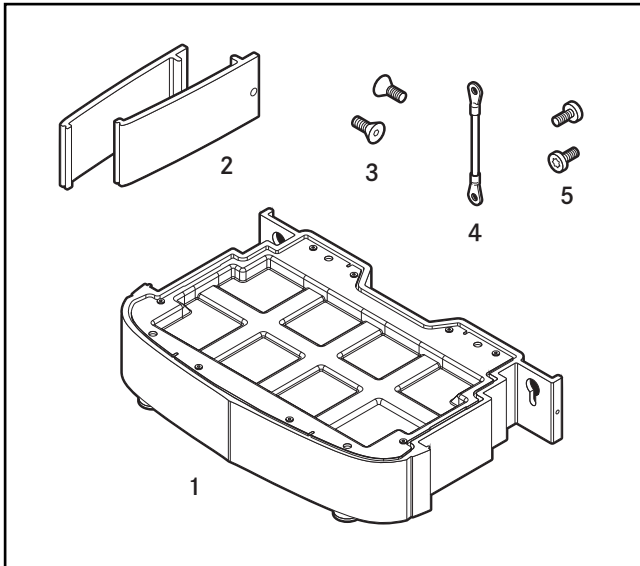
System cover

1	1x	System cover
2	2x	Expanding rivets
3	1x	RJ45 terminating resistor
4	1x	RJ45 ribbon cable
5	1x	Warning sticker
6	2x	HV cable (25 mm ²) for inverter (2 m)
7	1x	Protective earth conductor for inverter (2 m)
8	1x	RJ45 cable for inverter (2 m)



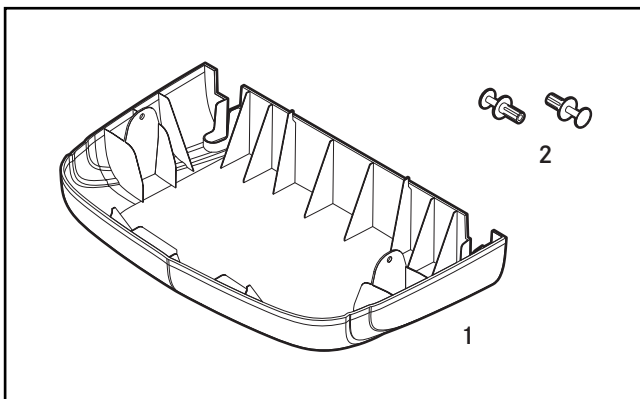
Energy storage module

1	1x	Energy storage module
2	2x	Energy storage module trunking covers
3	2x	Screws for trunking covers
4	1x	Protective earth
5	2x	Screws for protective earth
6	1x	HV cable + terminal (red)
7	1x	HV cable - terminal (black)
8	1x	RJ45 cable (angled)
9	1x	Manual



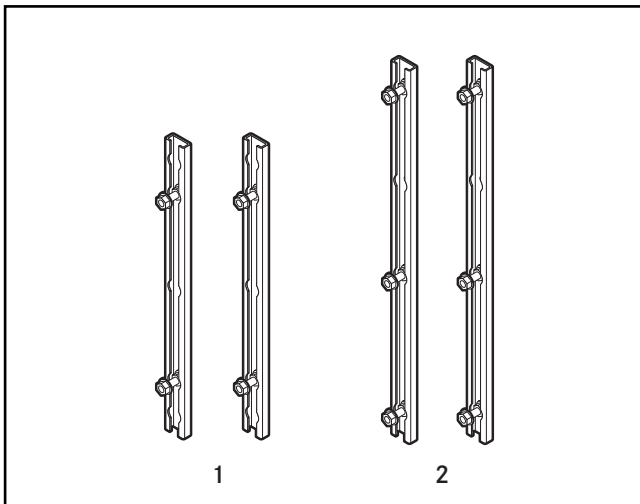
Base (upright installation)

1	1x	Base
2	2x	Trunking covers for bases
3	2x	Screws for trunking cover
4	1x	Protective earths
5	2x	Screws for trunking covers



Floor cover (wall installation)

1	1x	Floor cover
2	2x	Expanding rivets




Installation rails

1	2x	Installation rail (wall)
1	2x	Installation rail (upright)

The installation rails are supplied according to the number of energy storage modules and the installation type (upright or wall installation).

3.2 Inverter

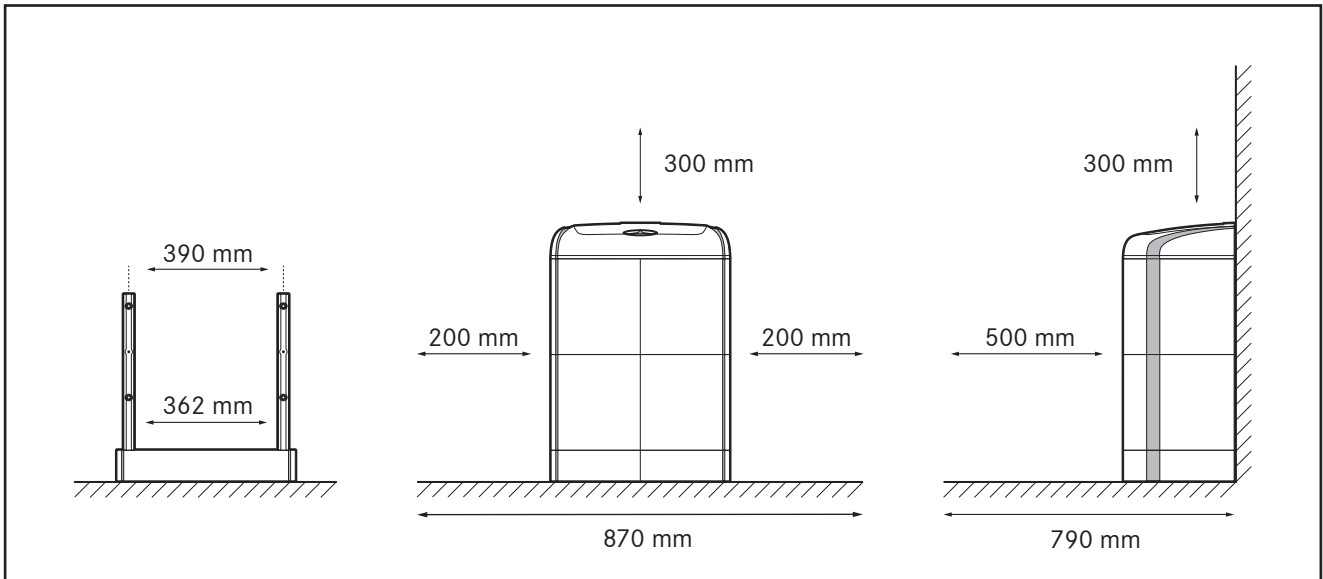
 To prevent harm to people or damage to the energy storage system, only use approved inverters.

The Mercedes-Benz Energy Storage Home can only be operated using an inverter that has been approved by Deutsche ACCUMOTIVE GmbH & Co. KG: There is a table of approved inverters available at:

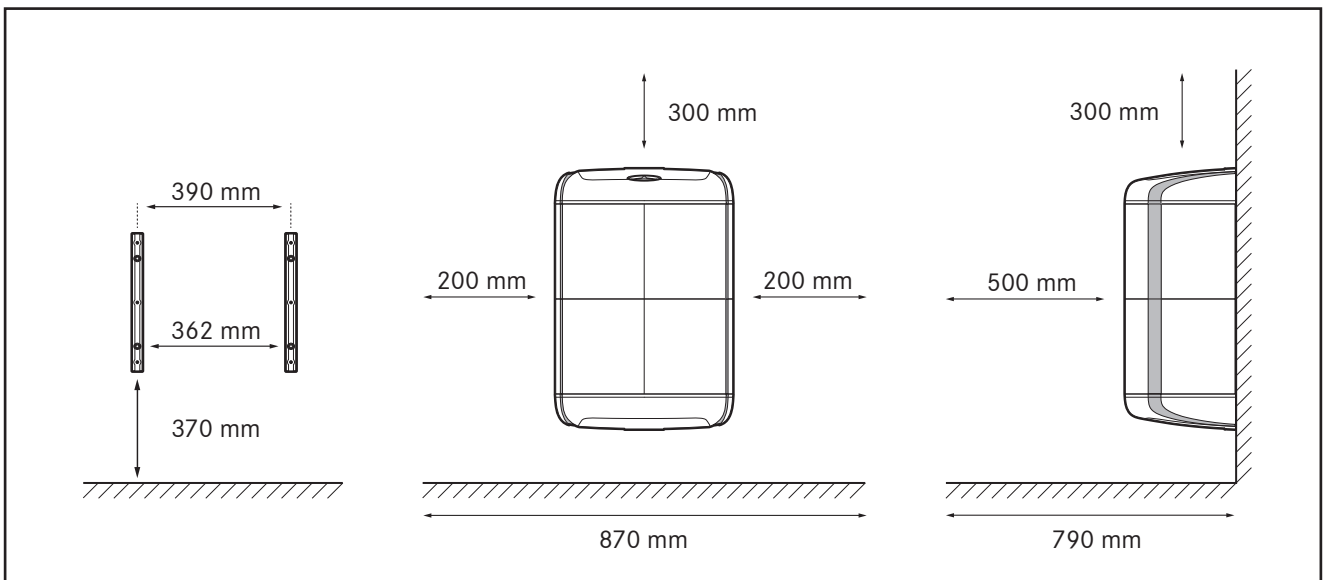
www.mercedes-benz-energy.com/support

3.3 Distances

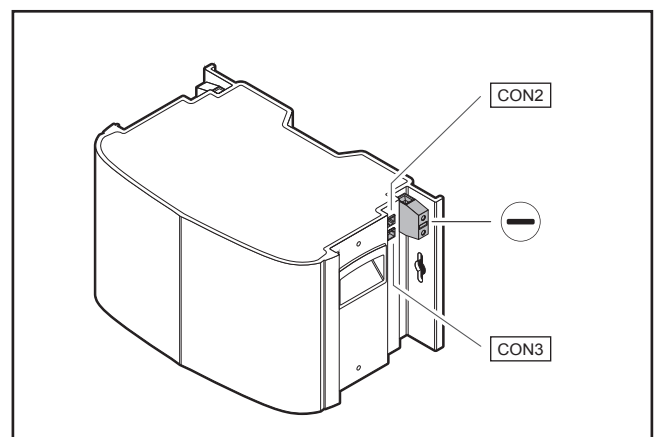
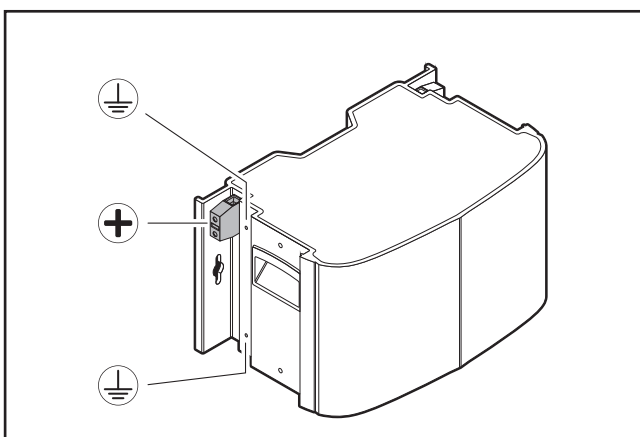
Freestanding



Wall-mounted



3.4 Connections



4. Installation



DANGER Arc flash hazard

If wires connected to the active system become detached, their high energy content means there is a high risk of arc flash. Arc flash poses a threat to life and limb.

- Wires must be correctly attached (maintenance-free and strain-relieved)!
- Wires may only be connected or disconnected with the power off (before starting up or after switching off)!



WARNUNG Falling module hazard

Energy storage modules are heavy enough to injure body parts or damage objects even if falling from a low height.

- Wear suitable protective equipment when transporting or assembling energy storage modules!
[2.2 Personal protective equipment (PPE); S.8]
- Use the handles provided when lifting and carrying the energy storage modules!
- During installation take care to follow the instructions given in this manual. [4. Installation; S.12]
- For safety reasons, any modules that have fallen cannot be reused!



CAUTION Electrostatic discharge hazard

As a rule, electrostatic discharges do not cause harmful current surges. However, they may startle you, leading to the risk of an accident or damage to electronic equipment.

- Earth tools prior to touching the Mercedes-Benz Energy Storage Home system or wear ESD-compliant protective equipment (gloves at the very least)!
- Be aware of your surroundings!
- During installation take care to follow the instructions given in this manual!
[4. Installation; S.12]

Target group

Trained electrician wearing PPE for installation [2.2 Personal protective equipment (PPE); S.8]

Tools required

13 open-ended spanner

Screwdriver (6.5 mm slot, insulated)

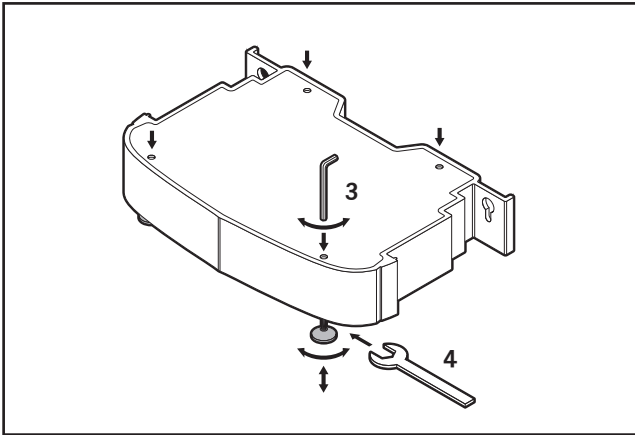
Screwdriver (TX 20)

Hex key (4 mm und 3 mm)

4.1 Set-up

The Mercedes-Benz Energy Storage Home Gen.1.5 is designed for upright installation and wall installation. Up to four individual energy storage modules may be stacked vertically on top of each other. If installing five or more energy storage modules, a second unit will have to be assembled. Only use the original parts supplied for installation!

4.1.1 Upright Installation

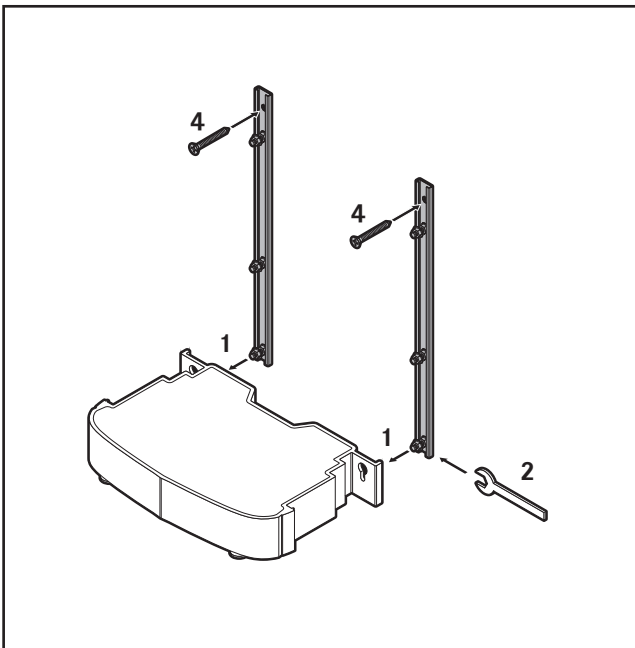


4.1.1.1 Base



To ensure stable installation check that the base is horizontally aligned!

- (1) Place the base on the floor.
- (2) Lay a spirit level on the base.
- (3) Use the hex key (4 mm) to adjust the height of the feet.
- (4) Fasten the feet with the aid of the nuts.
 - Base installed.

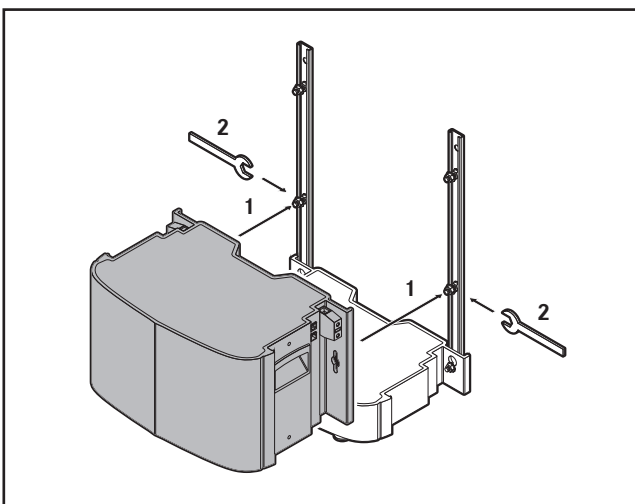


4.1.1.2 Fastening installation rail (upright)



Fasten the installation rail (upright) to the wall to prevent accidental displacement of the unit!

- (1) Attach the installation rail (upright) to the unit by inserting the bolts into the slots in the base and energy storage module.
- (2) Screw the nuts tight onto the bolts.
- (3) Position the unit against the wall.
- (4) Use appropriate screws and dowels to fasten the installation rail (upright) to the wall to prevent the unit from tipping over.
 - Installation rails (upright) mounted and fastened to the wall.

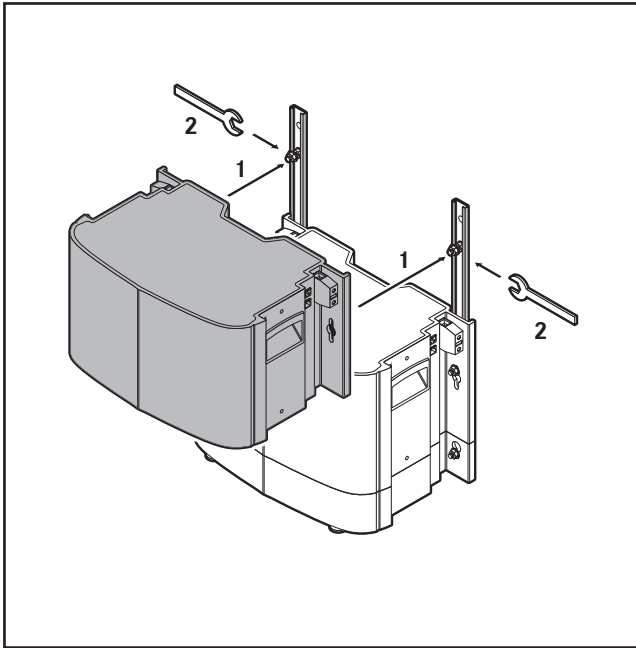


4.1.1.3 Installing initial energy storage module



The underside of the energy storage module exactly fits onto either the top of the base or the top of another module.

- (1) Use the slots and bolts provided to attach the initial energy storage module to the installation rail (upright). The attached energy storage module must be fitted flush with the base underneath.
- (2) Screw the nuts tight onto the bolts.
 - Initial energy storage module installed.

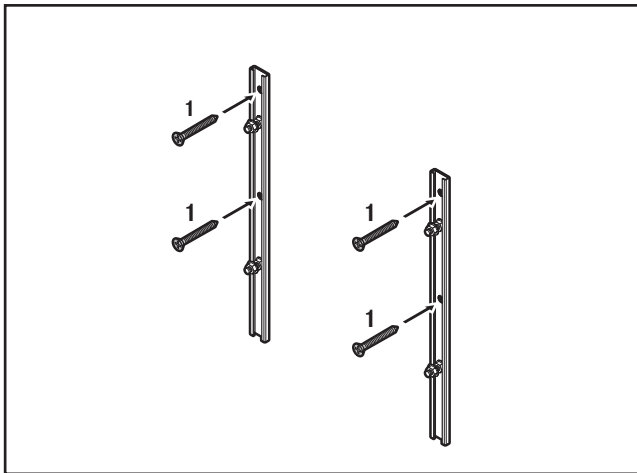


4.1.1.4 Installing additional energy storage modules

The installation rails (upright) exactly match the number of energy storage modules supplied. If you wish to extend your Mercedes-Benz Energy Storage Home system, you will need additional installation rails.

- (1) Use the slots and bolts provided to fasten the second energy storage module to the installation rail (upright). The additional energy storage module must be fitted flush with the module underneath.
- (2) Screw the nuts tight onto the bolts.
- (3) Repeat the process until all the energy storage modules have been attached to the installation rails (upright). Remember that the maximum unit height is four energy storage modules.
 - Energy storage module(s) now installed.

4.1.2 Wall assembly

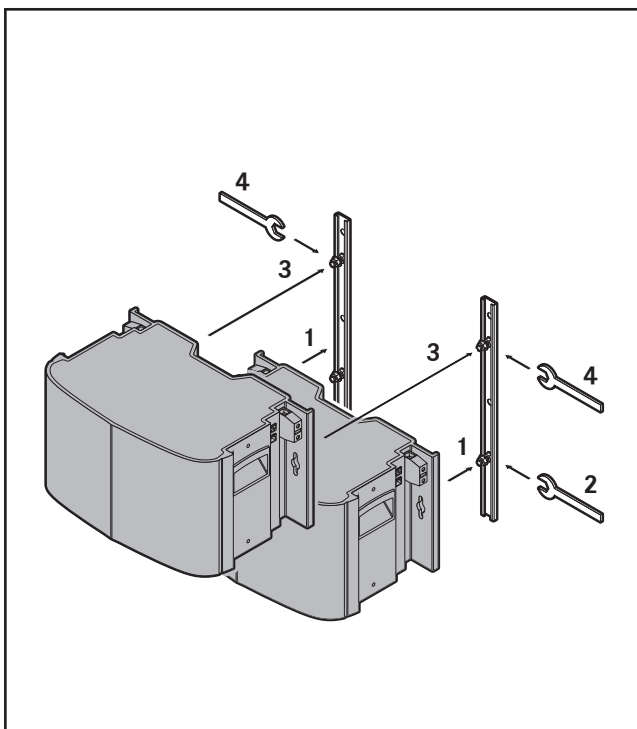


4.1.2.1 Installing installation rail (wall)



Make sure that the rails are firmly attached to the wall. The wall should be able to bear the total weight.

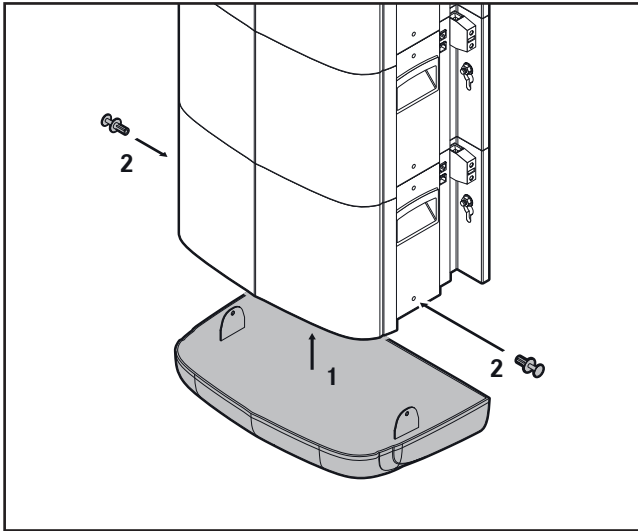
- (1) Attach the installation rails (wall) to the wall. Use all the holes provided in the installation rail and ensure a minimum spacing of 50 cm to the base (bottom of the installation rail [wall]).
 - Installation rail (wall) installed.



4.1.2.2 Install energy storage modules

The installation rail (wall) provided is only designed for the exact number of energy storage modules. If you want to extend your Mercedes-Benz Energy Storage Home, you will need another installation rail.

- (1) Use the slots and bolts provided to fasten the bottom-most energy storage module to the installation rail (wall).
- (2) Screw the nuts tight onto the bolts.
- (3) Use the slots and bolts provided to fasten the second energy storage module to the installation rail (wall). The energy storage module added should be placed flat on top of the module beneath.
- (4) Screw the nuts tight onto the bolts.
- (5) Repeat the process until all the energy storage modules have been attached to the installation rail (wall). Take note of the maximum installation height of four energy storage modules.
 - Energy storage module(s) installed.



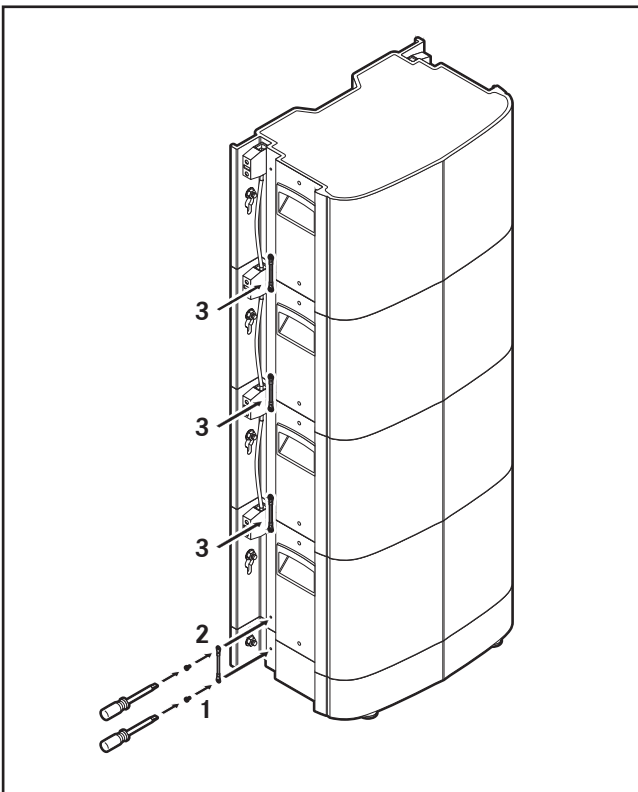
4.1.2.3 Installing base cover

A separate cover is provided for the base.

- (1) Attach the base cover to the bottommost energy storage module vertically from the bottom.
- (2) Attach the base cover to the left and right of the energy storage module using expanding rivets.
 - Base cover installed.

4.2 Connecting up a unit

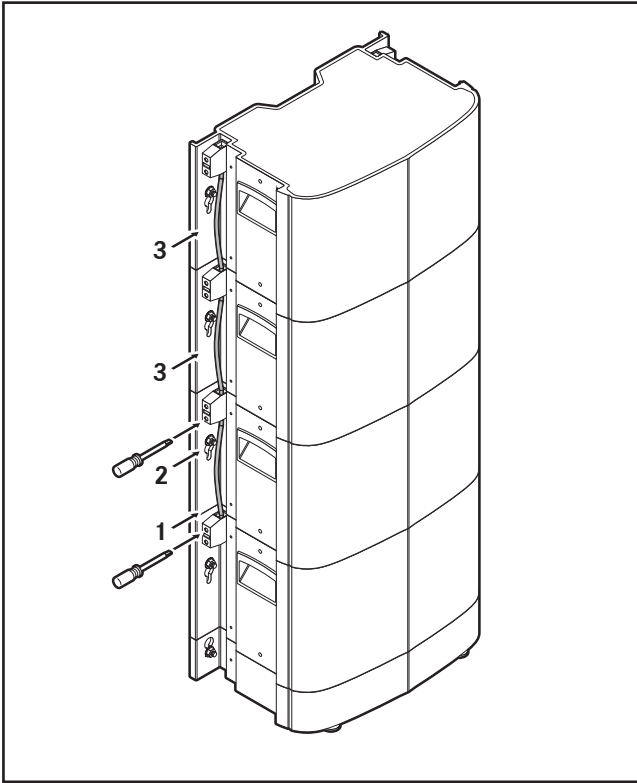
With two or more energy storage modules, the protective earth, the positive and negative terminals and the communication link between the energy storage modules must be connected up, beginning with the bottom energy storage module. Only use the original parts provided for the installation!



4.2.1 Protective earth

In the case of wall assembly, start with the first energy storage module as there is no base used.

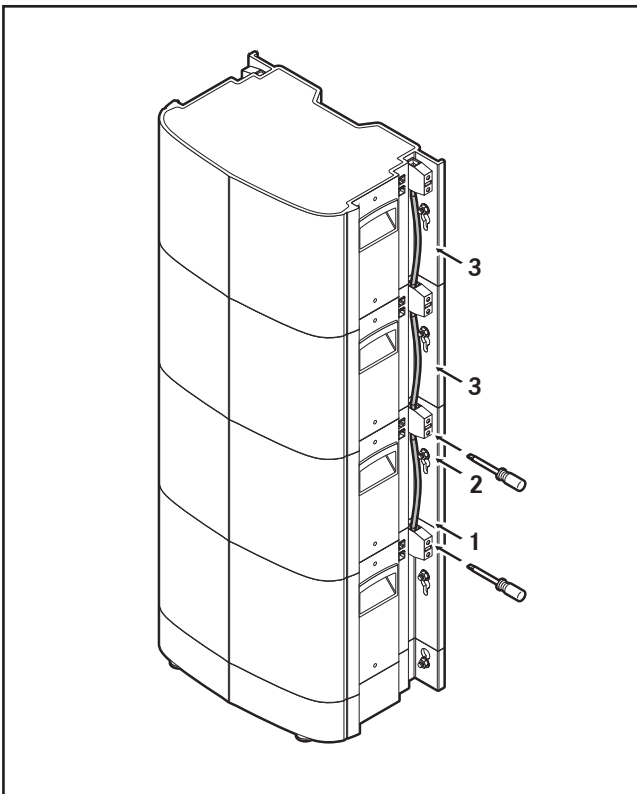
- (1) Screw the protective earth onto the base.
- (2) Screw the other end of the same cable onto the energy storage module above.
- (3) Repeat the process until all the energy storage modules are connected in sequence with the protective earth.
 - Protective earth now connected.



4.2.2 Positive terminal

The positive terminal of the feed-through terminal block is marked with '+'.

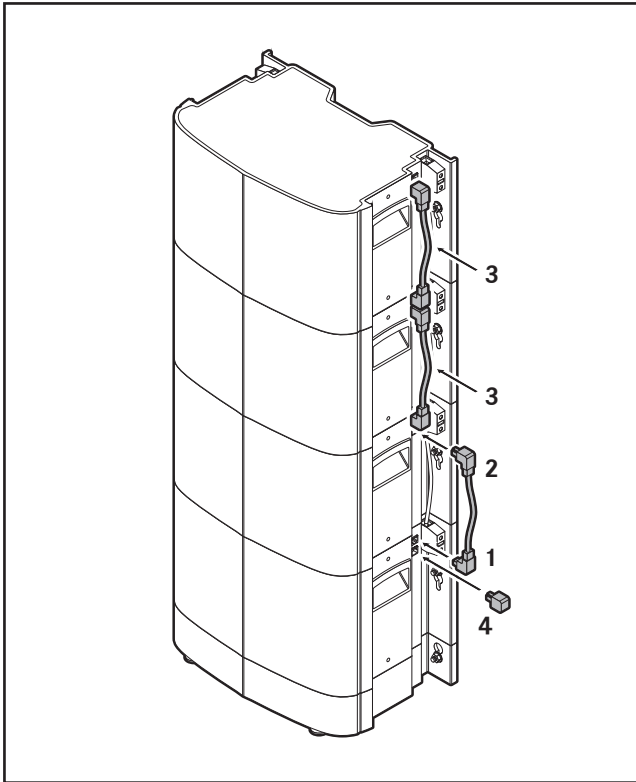
- (1) Insert the HV cable (red) into the positive terminal of the feed-through terminal block of the bottom-most energy storage module. Screw it tight (tightening torque 4-4.5 Nm).
- (2) Insert the other end of the same HV cable (red) into the positive terminal of the feed-through terminal block of the energy storage module above and screw it tight (tightening torque 4-4.5 Nm).
- (3) Repeat the process until all the energy storage modules are attached to the positive terminal.
 - positive terminal now connected.



4.2.3 Negative terminal

The negative terminal of the feed-through terminal block is marked with '-'.

- (1) Insert the negative terminal of the HV cable (black) into the negative terminal of the feed-through terminal block of the energy storage below and screw it tight (tightening torque 4-4.5 Nm).
- (2) Insert the other end of the same HV cable into the negative terminal feed-through terminal block of the energy storage module above it and screw it tight (tightening torque 4-4.5 Nm).
- (3) Repeat the process until all the energy storage modules are attached to the negative terminal.
 - negative terminal now connected.



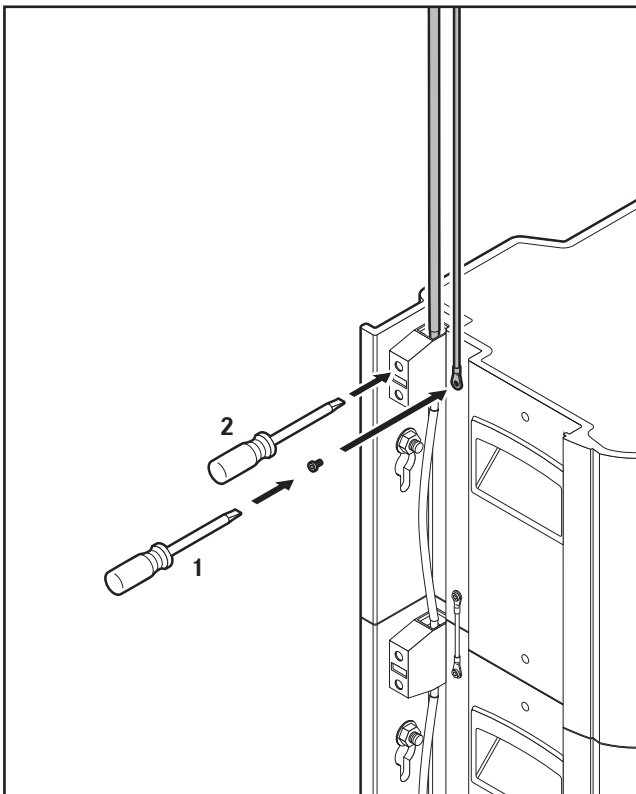
4.2.4 Communication link

The RJ45 connection sockets on the energy storage system are each marked, the upper socket with 'CON2' and the lower socket with 'CON3'.


- (1) Insert the RJ45 cable into the upper RJ45 connection socket on the bottom energy storage module.
- (2) Insert the other end of the same cable into the lower RJ45 connection socket on the energy storage module above.
- (3) Repeat the process until all the energy storage modules are connected with each other via RJ45 cables.
- (4) Insert the RJ45 terminating resistor into the lowest free RJ45 connection socket on the bottom energy storage module.
 - Communication link connected.

4.3 Connecting the module to the inverter

This steps described in this section refer to the wiring for the Mercedes-Benz Energy Storage Home only. In order to connect the inverter, please refer to the installation instructions provided with your specific inverter.

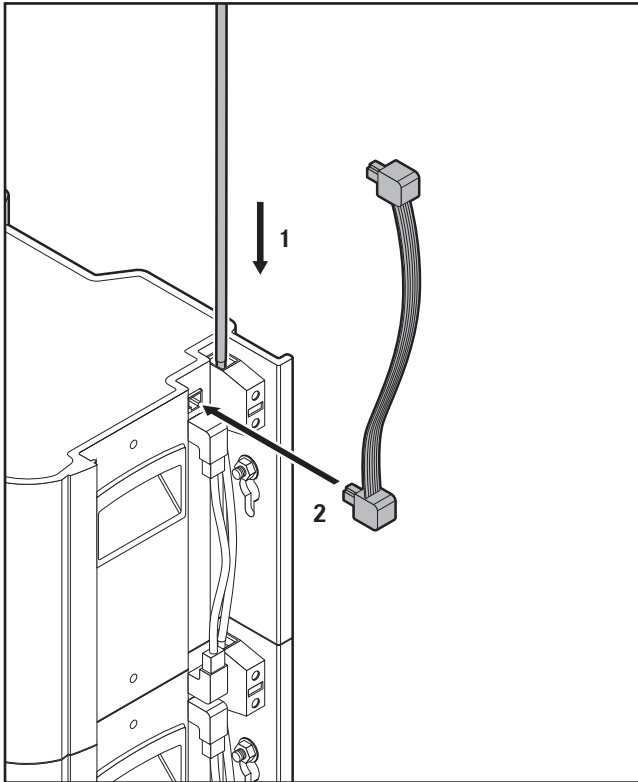


4.3.1 Positive terminal and protective earth

 Note that the cables to the inverter must be attached to the wall in order to relieve the strain on it!

The positive terminal on the feed-through terminal block is marked with '+ '.

- (1) Screw the protective earth into the upper energy storage module.
- (2) Insert the HV cable (25 mm², positive terminal) into the positive terminal on the upper energy storage module's feed-through terminal block and screw it tight (tightening torque of 4–4.5 Nm).
 - Protective earth and HV cable (25 mm², positive terminal) for inverter now now connected.



4.3.2 Negative terminal and RJ45 ribbon cable

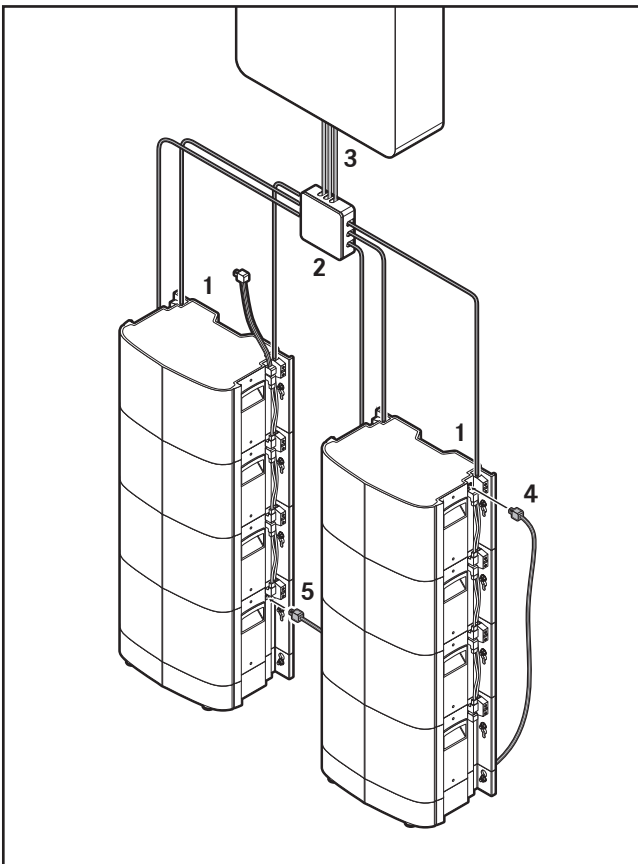


Note that the cables to the inverter must be attached to the wall in order to relieve the strain on it!

The negative terminal on the feed-through terminal block is marked with '-'. The upper RJ45 connection socket is marked with the word 'CON2'.

- (1) Insert the HV cable (25 mm², negative terminal) into the negative terminal of the feed-through terminal block of the topmost energy storage module and screw it tight (tightening torque of 4–4.5 Nm).
- (2) Insert the RJ45 ribbon cable into the upper RJ45 connection socket on the upper energy storage module.
 - HV cable's negative terminal (25 mm²) and RJ45 ribbon cable for inverter or system cover now connected.

4.4 Connecting up two units

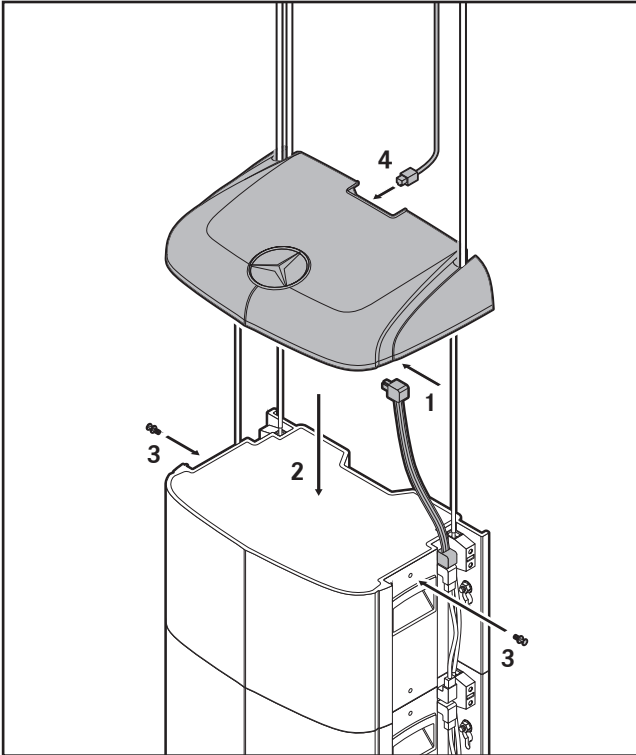


Note that the cables in the distribution box must be connected in **parallel**!

The distribution box and the HV cable (50 mm²) are not supplied with the Mercedes-Benz Energy Storage Home. You should replace the RJ45 ribbon cable for the second unit with a longer RJ45 cable (not supplied).

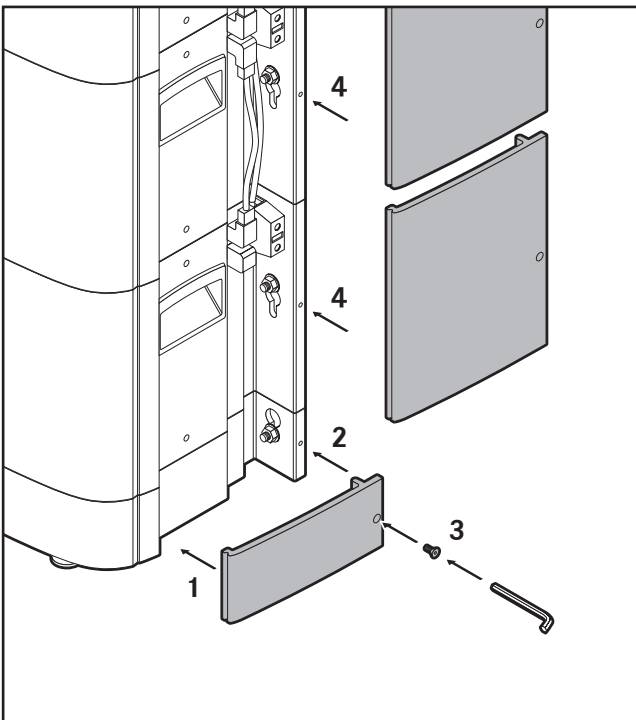
- (1) Connect the individual units as described in the section 'Connecting the module to the inverter'. [4.3 Connecting the module to the inverter; S.17]
- (2) Next connect the HV cable (25 mm²) in **parallel** (not in series) in a distribution box.
- (3) Use an HV cable (50 mm²) to connect the distribution box with the inverter.
- (4) Insert the RJ45 cable into the upper RJ45 connection socket on the second unit's upper energy storage module.
- (5) Insert the other end of the same cable into the lower RJ45 connection socket on the first unit's lower energy storage module. The first unit does not have a terminating resistor.
 - The two units are now connected.

4.5 System cover



- (1) Insert the RJ45 ribbon cable into the RJ45 connection socket inside the system cover.
- (2) Place the system cover on top of the upper energy storage module, running the HV cable (25 mm², positive terminal) and the protective earth through the left-hand slot in the system cover and the HV cable (25 mm², negative terminal) through the right-hand slot.
- (3) Use the expanding rivets to fasten the system cover to the right- and left-hand sides of the energy storage module.
 - System cover now mounted.
- (4) Insert the RJ45 cable for communication with the inverter into the RJ45 connection socket on top of the system cover.
 - Communication link with the inverter now connected.

4.6 Trunking cover



In the case of wall assembly, start with the initial energy storage module as there is no base used.

- (1) Insert the groove on the trunking cover base into the tongue on the base.
- (2) Press the trunking cover onto the base.
- (3) Use the hex key (3 mm) to screw the trunking cover tight.
- (4) Repeat the process to attach the energy storage module trunking cover to the energy storage module.
- (5) Repeat the process on both sides of the Mercedes-Benz Energy Storage Home modules until all trunking covers have been mounted.
 - Trunking covers now mounted.

5. Starting up



The user should absolutely not connect, power up, or perform similar actions on their own. If you had successfully commissioned the Mercedes-Benz Energy Storage Home, yet now you think something is defective, or even just suspect it, because it disconnected from the grid or powered down (due to a malfunctioning inverter, power outage, defective cables, for example), you should contact your sales representative or installation technician.

The inverter used with the Mercedes-Benz Energy Storage Home determines how it is started up for the first time. For this reason, refer to 'Recommended procedure for setting up the system,' which is enclosed, for further information. Make sure you have the correct documentation for your inverter.

6. Dismantling



DANGER Arc flash hazard

If wires connected to the active system become detached, their high energy content means there is a high risk of arc flash. Arc flash poses a threat to life and limb.

- Wires must be correctly attached (maintenance-free and strain-relieved)!
- Wires may only be connected or disconnected with the power off (before starting up or after switching off)!



WARNING Falling module hazard

Energy storage modules are heavy enough to injure body parts or damage objects even if falling from a low height.

- Wear suitable protective equipment when transporting or assembling energy storage modules! [2.2 Personal protective equipment (PPE); S.8]
- Use the handles provided when lifting and carrying the energy storage modules!
- During installation take care to follow the instructions given in this manual! [4. Installation; S.12]
- For safety reasons, any modules that have fallen cannot be reused!



CAUTION Electrostatic discharge hazard

As a rule, electrostatic discharges do not cause harmful current surges. However, they may startle you, leading to the risk of an accident or damage to electronic equipment.

- Before touching the Mercedes-Benz Energy Storage Home during assembly or maintenance work, either earth all tools or wear ESD-appropriate protective equipment (gloves as a minimum)!
- Be aware of your surroundings!
- During installation take care to follow the instructions given in this manual! [4. Installation; S.12]

Target group

Trained electrician wearing PPE for installation [2.2 Personal protective equipment (PPE); S.8]

Tools required

13 open-ended spanner

Screwdriver (6.5 mm slot, insulated)

Screwdriver (TX 20)

Hex key (4 mm and 3 mm)

6.1 Switching off



Take note of the installation instructions for the inverter used.

Apply the following procedure when starting up your Mercedes-Benz Energy Storage Home.

- (1) Switch off the Inverter.
- (2) Switch off the Mercedes-Benz Energy Storage Home using the ON/OFF switch.
- (3) Wait 30 seconds.
 - The system has now been shut down.

6.2 Dismantling



Before dismantling the Mercedes-Benz Energy Storage Home it must be switched off [6.1 Switching off; S.21].

- (1) Remove the HV cables and RJ45 cable from the inverter.

Follow the installation instructions for the Sunny Island inverter connected.
- (2) Remove the RJ45 cable from the system cover.
- (3) Unscrew and remove all trunking covers.
- (4) Remove the two expanding rivets and take off the system cover.
- (5) Remove the two lower expanding rivets and remove the base cover (wall assembly).
- (6) Unplug the RJ45 terminating resistor.
- (7) Unplug all HV cables from the positive and negative terminals and remove them.
- (8) Unplug all protective earth and remove them.
- (9) Remove the nuts from the installation rails.
- (10) Remove the energy storage modules from the installation rails.
- (11) Unscrew and remove the wall fastening screws.
- (12) Remove the installation rails from the base (upright installation).
 - Mercedes-Benz Energy Storage Home is now dismantled.



After dismantling energy storage modules, make sure you store them correctly [9. Storage; S.22]

7. Maintenance and faults

7.1 Maintenance

The Mercedes-Benz Energy Storage Home is maintenance free. However, we recommend an annual insulation check by a trained electrician, during which the insulation resistance

of the terminals to the protective earth is tested using a suitable measuring device.

7.2 Faults

Faults, warnings and events in the Mercedes-Benz Energy Storage Home are displayed by the inverter in the form of a code. The Mercedes-Benz Energy Storage Home can correct

most faults itself. If the same code is displayed for a long time, please contact your reseller or installer.

8. Cleaning

Remove dust and dirt from the Mercedes-Benz Energy Storage Home regularly using a soft, dry cloth. For heavy soiling use a soft, dry brush. Do not use any solvents, scouring

agents or corrosive materials to clean the unit. Never remove or unplug connections or plugs during cleaning.

9. Storage

The Mercedes-Benz Energy Storage Home is shipped with a factory-preset charge state. The longer the system is kept in storage, the more the charge state decreases, potentially reaching a critical range. For this reason, you should never store the energy storage modules for periods exceeding the

information listed on the 'charging at latest' sticker. You can find this sticker attached to the packaging of your energy storage module.

If this storage period has been exceeded, the energy storage module can no longer be used for reasons of safety.

Storage conditions

Store in a dry, clean, cool, well-ventilated storage location

Do not store together with flammable materials

Keep away from foods, drinks and feedstuffs

Keep away from oxidising agents and strongly acidic or alkaline materials

Protect from heat/overheating

Protect from direct sunlight

Keep out of reach of children

Store at a temperature of between $-10\text{ }^{\circ}\text{C}$ and $+45\text{ }^{\circ}\text{C}$ (storage temperature of $< 30\text{ }^{\circ}\text{C}$ recommended, as higher temperatures will shorten the lifespan of the module and lead to self-discharge)

Maximum relative humidity 85% (non-condensing)

10. Transport

The Mercedes-Benz Energy Storage Home is subject to the U.N. Recommendations on the Transport of Dangerous Goods.

Always abide by local regulations and laws when transporting the energy storage system and always transport it in the original packaging.

11. Disposal



Battery unit: Do not throw away.

The Mercedes-Benz Energy Storage Home contains lithium-ion batteries that cannot be disposed of with normal household waste.

For this reason you must dispose of them in accordance with local regulations. Please contact your sales representative or installation technician for further information.

12. Technical data

12.1 General data

General data	
Width	470 mm
Depth	290 mm
Maximum and minimum upright installation height	420 mm/1170 mm
Maximum and minimum wall installation height	430 mm/1180 mm
Maximum and minimum upright installation total weight	Approx. 37 kg and approx. 133 kg
Maximum and minimum wall installation total weight	Approx. 35 kg and approx. 131 kg
Installation type	Upright installation or wall installation
AC/DC-coupled	Possible (system-dependent)
1 / 3-phase	Possible (system-dependent)
Protection type	IP20
Ambient temperature	+6 °C to +44 °C
Battery data	
Number of energy storage modules	1-8
Usable energy content	2.3 kWh to 18 kWh
Number of full cycles	8000 (standard cycles, full load, 80 % DoD)
Expected percentage of initial capacity after ten years	> 80 %
Operating voltage range	43,5V bis 53,5V
Cell technology	Lithium-ion (nickel, manganese, cobalt)
Long-term battery output	~1.25 kW to ~4.6 kW (depending on system size)
System efficiency	97% round cycle

12.2 Recommended operational limits

Condition/state	Recommendation
Cell voltage	
Minimum	$\geq 3,35 \text{ V}$
Maximum	$\leq 4,11 \text{ V}$
Charge temperature	
Minimum	$\geq +6 \text{ }^\circ\text{C}$
Maximum	$\leq +44 \text{ }^\circ\text{C}$
Discharge temperature	
Minimum	$\geq +6 \text{ }^\circ\text{C}$
Maximum	$\leq +44 \text{ }^\circ\text{C}$

12.3 Emergency shutdown safety limits

Condition/state	Recommendation
Cell voltage	
Minimum	$< 3 \text{ V}$
Maximum	$> 4,2 \text{ V}$
Charge temperature	
Minimum	$< +5 \text{ }^\circ\text{C}$
Maximum	$> +45 \text{ }^\circ\text{C}$
Discharge temperature	
Minimum	$< +5 \text{ }^\circ\text{C}$
Maximum	$> +45 \text{ }^\circ\text{C}$

13. Personal data sheet

Here you can keep all the details of your Mercedes-Benz Energy Storage Home ready for easy access.

Your Mercedes-Benz Energy Storage Home

Number

Date

Serial number	Hardware status	Software status	Storage duration
---------------	-----------------	-----------------	------------------

1

2

3

4

5

6

7

8

Periphery used

Inverter

Energy management system

Size of PV installation

Installer

Name

Address

Tel.

Email

Your notes



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