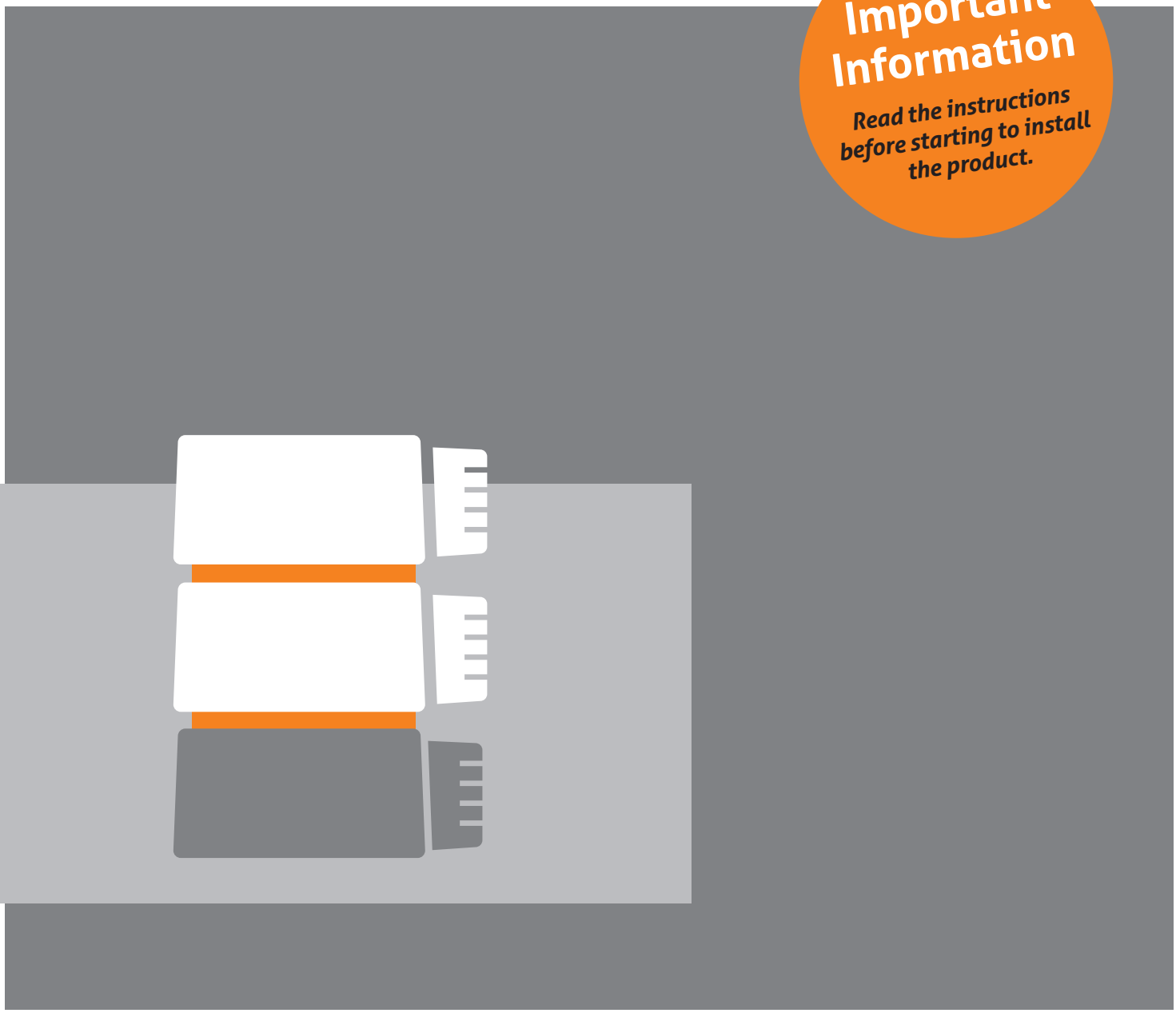
EN

Installation and Operating Instructions

**Important Information**

*Read the instructions before starting to install the product.*



# MyReserve 25

SOLARWATT®
power to the people

## Contents

# General information

## About these instructions

Read these Installation and Operating Instructions thoroughly in order to ensure that the MyReserve functions smoothly. Installation and service must be carried out by qualified electrician who has been trained and certified by SOLARWATT. The installation and operating manual should be easily accessible at all times to everyone involved in work on the storage system.
With more than 20 years of production experience under its belt, SOLARWATT is one of the pioneers of the German solar industry. What started in 1993 as a two-person company is now a leading manufacturer of solar modules – a provider of intelligent energy solutions for both private and commercial uses. The MyReserve battery storage system completes the systematic approach of SOLARWATT.
By choosing MyReserve, you will benefit from a high-quality and innovative product from the SOLARWATT family. The product makes use of safe, highly efficient, production-ready battery technology combined with excellent battery module execution. MyReserve also has a battery management system that efficiently operates and monitors all components.
This installation and operating manual enables you to safely and correctly integrate the MyReserve into a photovoltaic system so that this innovative battery storage system can provide the optimal benefit and thus increase your household's internal solar consumption.

## Scope of application

The installation and operating manual applies to the MyReserve product family of SOLARWATT GmbH, which is comprised of the following product components:

- MyReserve Command 25
- MyReserve Pack 24.3 (IP54)
- AC Sensor Flex

## Terms and abbreviations

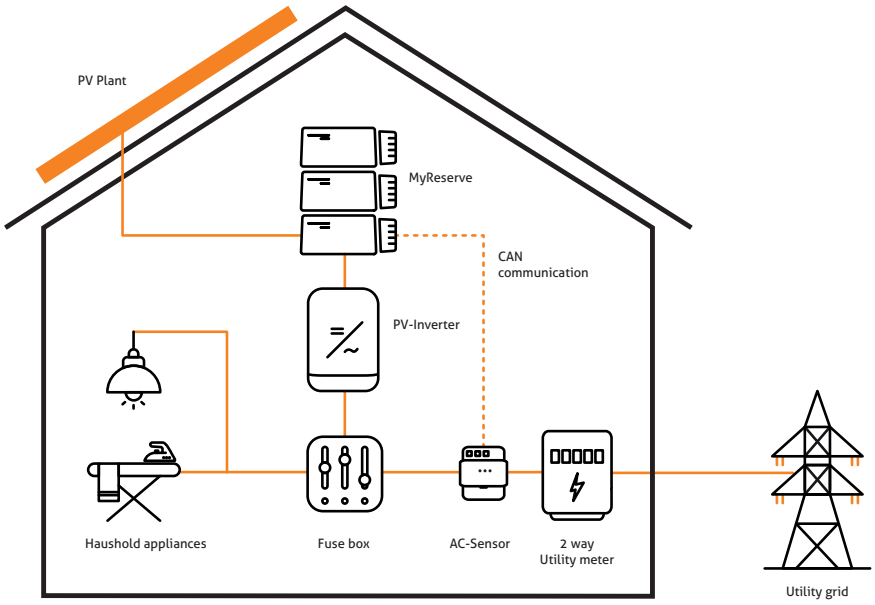
| | |
|---|---|
| AC | Alternating Current |
| DC | Direct Current |
| ACS | AC Sensor Flex |
| CAN | Controller Area Network |
| EVU | Power supply company |
| Com. | Communication |
| LED | Light-Emitting Diode |
| PDG | PowerDataGateway |
| PE | Protective Earth |
| PV | Photovoltaic |
| I | Inverter |
| MyReserve Pack | Battery module |

## Limitation of liability

SOLARWATT assumes no liability for personal injury, damage to property or the product itself, or for consequential damages occurring as a result of disregarding this installation and operating manual. Furthermore, no liability shall be assumed for damage to the product that results from or has been caused by improper use, repairs, opening of the battery storage system, or from any actions of unqualified persons who have not been certified by SOLARWATT. This limitation of liability also applies to the use of unapproved replacement parts and failure to comply with the specified maintenance intervals. No unauthorized modifications or technical alterations may be made to the product.

# Brief description of MyReserve

MyReserve is a DC-coupled and modularly expandable battery storage system for increased energy supply. The system is installed between the PV array and the inverter and is suitable for existing system and new systems. MyReserve can feed power into either single-phase or three-phase inverters. Its AC Sensor detects household electrical power drawn from or fed into the public grid. These variables are evaluated in order to determine the power output of the battery storage or the amount of charging of the battery. More or less power is transferred to the inverter depending on household consumption.
The household energy needs are supplied by the PV system during the day. If the energy requirement is greater than the electricity that is currently being generated, MyReserve discharges so that the current drawn from the public grid is minimized. In pure battery operation (night), the system only discharges the amount of electricity that the household requires. MyReserve is charged by the surplus electricity of the connected PV system. In the process, generation calculations of the PV system and load profiles of the household are evaluated by means of a self-learning, intelligent charge algorithm and an especially gentle charging strategy is pursued to maximize the battery service life. The aim of this charging strategy, among other things, is to use the full charge of the storage battery as late as possible in the day, ending the process at dusk, which protects the lithium-ion cell and extends its operating life.




DC generator storage system

# Safety

## Intended use

The MyReserve is designed exclusively for storing electrical energy generated by PV systems, and should be used for this purpose only. All technical data must be observed. Using the MyReserve improperly or for purposes other than the intended one can result in product malfunctions and/or life-threatening situations. This will also void any warranty claims.

## Improper use

- Do not use MyReserve in vehicles (motor vehicles, aircraft or ships)
- Do not use MyReserve as an uninterruptible power supply (UPS)
- Do not connect MyReserve to PV systems in which the negative pole and/or positive pole of the array or panel is grounded
- Do not use MyReserve for the operation of medical equipment
- Do not use MyReserve to operate devices for which functional safety must be guaranteed

Any manipulation/modification of the CAN communication of the MyReserve will void any warranty claims. Refer to the data sheets of the respective components for information about the climatic installation, storage and transport conditions. Disregarding the information provided in this installation and operating manual will void any warranty claims.

## Safety notices and general sources of danger

**⚠ DANGER**

**Damage due to incorrect handling!** Failure to comply with the following instructions regarding device usage and handling can result in danger to life and limb and/or property damage to the product and other equipment; SOLARWATT assumes no liability for such hazards.

- The MyReserve battery storage system may only be commissioned by trained electricians with specific SOLARWATT training. There is a risk of electric shock.
- For maximum safety, install DC-side lightning and surge protection between the PV system and MyReserve.
- Animals, children, persons with reduced physical, sensory or mental capacities, and persons lacking sufficient experience and knowledge must not be left unattended in the vicinity of the device.
- Make sure that the device is properly attached to the wall.
- Do not clean the unit with alcohol or other chemical agents. In the process, follow the instructions in chapter "Cleaning / care and maintenance".
- The maximum current and voltages characteristics according to the data sheet specifications of the respective product must be observed. Otherwise, the product can be damaged.
- Only use spare parts and accessories that are approved or recommended by SOLARWATT.
- Always observe all applicable national standards and directives for connection of battery storage systems.
- Repairs or system updates must be carried out by qualified personnel who are authorized and trained by SOLARWATT.
- Electrical cables must be protected from improper use so that no damage can occur due to twisting, clamping or similar abuse. Do not use cracked or frayed electrical cables or plug connectors. Inspect

electrical cables from time to time for damage and immediately decommission them if any defects are found.
- Never ground the MyReserve with a lightning conductor, telephone wire or gas line.
- The temperature of the MyReserve Command housing can increase to over 60°C.
- The product must not be disposed of with the household waste. The applicable disposal regulations in the respective country must be observed.
- Do not dispose of battery modules by burning them!
- Do not open or damage battery modules. Do not touch any electrolyte that has leaked from the battery; it is harmful for the skin and eyes and can be toxic.
- Remember that charged capacitors pose an electrical hazard. A discharge time of 5 minutes must be observed after shutting down MyReserve Command before work on the device can take place.

## Requirements for installers

Installation and commissioning of the MyReserve according to this installation and operating manual may only be carried out by trained and qualified personnel who fulfill the following criteria:
- Authorized by SOLARWATT
- Trained electronics technicians, electricians or other specialists with similar qualifications who meet local licensing requirements to install PV
- Authorized professionals with thorough knowledge of all applicable standards, directives and laws
- Specialists who have taken part in one of SOLARWATT's MyReserve certification courses

## Icons

### General information

**DANGER**

This symbol with the "Danger" notice indicates an imminent danger to life and limb. If this notice is disregarded, severe or life-threatening personal injury can occur.

**IMPORTANT**

This symbol indicates situations which are dangerous to people and/or the product. Disregarding this notice may result in personal injury or equipment damage.

**NOTE**

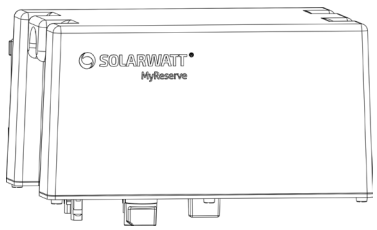
This notice provides recommendations for use and helpful tips.

**Symbols on type plates and labels**

| | |
|---|---|
|  | The product must not be disposed of with the household waste. The applicable disposal regulations in the respective country must be observed. Contact your local SOLARWATT office for assistance. |
|  | Batteries can be returned to the point of sale free of charge. The product must not be disposed of with household waste. The regulations for disposal applicable in the respective country must be observed. |
|  | This operating manual must be read prior to installation or commissioning. |
|  | The relevant device equipment conforms to requirements according to EU Directives. |
| IP54 | IP54 enclosures have a high level of protection against particles, and a fair amount of protection against water. |
|  | Warning of dangerous electrical voltage. |
|   | Charged capacitors pose an electrical hazard. A discharge time of 5 minutes must be observed |
|  | Warning of explosion-prone materials. |
|  | Warning of flammable materials. |
|  | Warning of danger from batteries. |
| UN 38.3 | The relevant device equipment conforms to requirements according to UN Transport Test 38.3. |
|  | Bluetooth communication |
|  | RCM (Regulatory Compliance Mark)<br>The product does fulfill the requirements of the applicable Australian standard |

# System components

## MyReserve Command 25, MyReserve Pack 24.3 (IP54)

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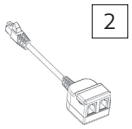
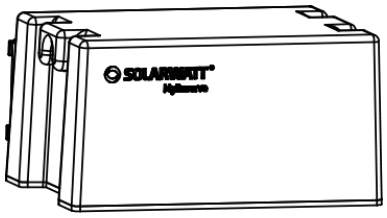


2

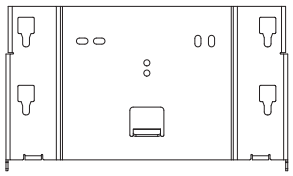
| | |
|---|---|
| 1 | MyReserve Command 25 |
| 2 | RJ45 T-Adapter<br>optional accessory for<br>cluster installations |



3

| | |
|---|---|
| 3 | MyReserve Pack 24.3 (IP54) |

## MyReserve Pack 24.3 (IP54) accessory kit



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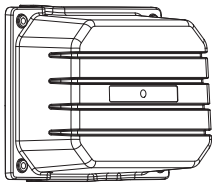

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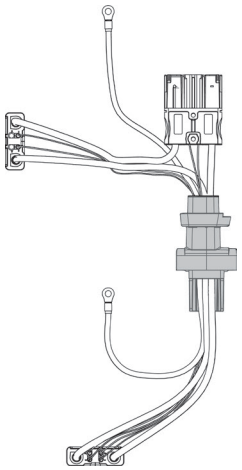

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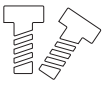


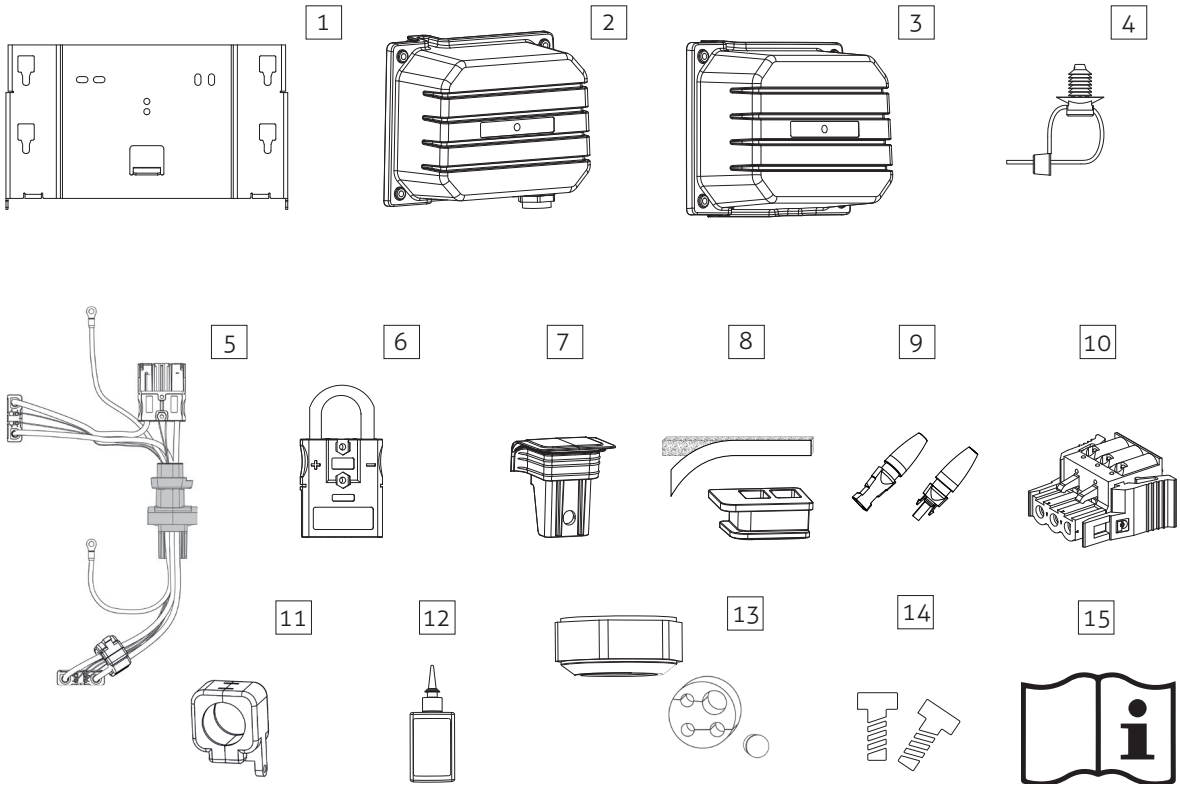
4

| | Quantity | Description |
|---|---|---|
| 1 | 1x | Wall bracket |
| 2 | 1x | Protective cover MyReserve Pack |
| 3 | 1x | Battery to battery wiring harness |
| 4 | 1x | MyReserve 25 screw set* |

*MyReserve 25 screw set

| Quantity | Description |
|---|---|
| 4x | Round-head screw M6x22 TX30 |
| 1x | Countersunk head screw M6x20 TX30 |
| 2x | Round-head screw M6x12 TX30 |

# MyReserve Command 25 accessory kit

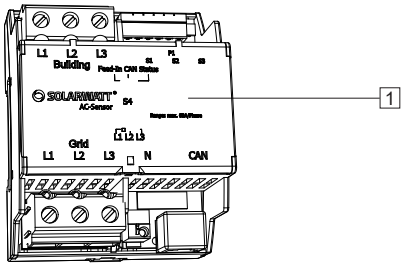



| | Quantity | Description |
|---|---|---|
| 1 | 2x | Wall bracket |
| 2 | 1x | MyReserve Command 25 protective cover |
| 3 | 1x | MyReserve Pack protective cover |
| 4 | 2x | Cable ties |
| 5 | 1x | MyReserve Command to battery wiring harness |
| 6 | 1x | Terminating plug |
| 7 | 1x | Rubber gasket seal MyReserve Pack |
| 8 | 1x | Rubber gasket seal MyReserve Command 25 incl. foam seal |
| 9 | 2x each | PV connectors - PV connectors + |
| 10 | 1x | AC connector |
| 11 | 2x | Split ferrite |
| 12 | 1x | Technical grease |
| 13 | 1x | Cable branch collector disc of MyReserve Command protective cover (incl. seal inserts) |
| 14 | 2x | MyReserve screw set* |
| 15 | 1x | Product documentation |

*Schraubenset MyReserve 25

| Quantity | Description |
|---|---|
| 4x | Round-head screw M6x22 TX30 |
| 1x | Countersunk head screw M6x20 TX30 |
| 2x | Round-head screw M6x12 TX30 |

## AC Sensor



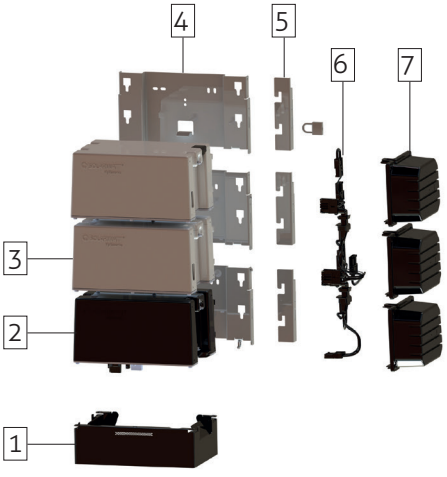

| | |
|---|---|
| 1 | AC-Sensor Flex |

## Required tools, resources, and installation materials

- Spirit level and tape measure, cable stripper, pliers or 41 mm socket wrench wire stripper, wire cutter
- Drill / screwdriver
- Ratchet (socket wrench 10)
- Torx screwdriver (TX30)
- Appropriately rated wall anchors and screws for fastening the wall bracket (suitable for weight bearing on the fastening surface)
- 3-pole automatic circuit breaker for safeguarding AC Sensor in three phase installations OR 1-pole circuit breaker for single phase installations (suggested 10amp)
- 1-pole automatic circuit breaker, (suggested 10amp) for safeguarding MyReserve Command power supply
- Technical grease (for outdoor installations)
- AC cable: H07 RNF 3 x 1.5 mm² or alternatively with outer diameter 9.2 - 10.7 mm (flexible cable)
- DC cable: min. 4 mm² - max. 6mm², outer diameter 5.5-7.5 mm
- CAN cable: min. Cat5.e, outer diameter 6.0 - 6.5 mm, with twisted-pair wires (Patch cable), alternatively network installation cable and 2 user configurable RJ45 plugs, weather resistant for outdoor installation
- LAN cable: minimum spec. Cat5.e, outer diameter 6.0 - 6.5 mm, weather resistant for outdoor installation
- Mobile device with MyReserve App incl. Pro functions

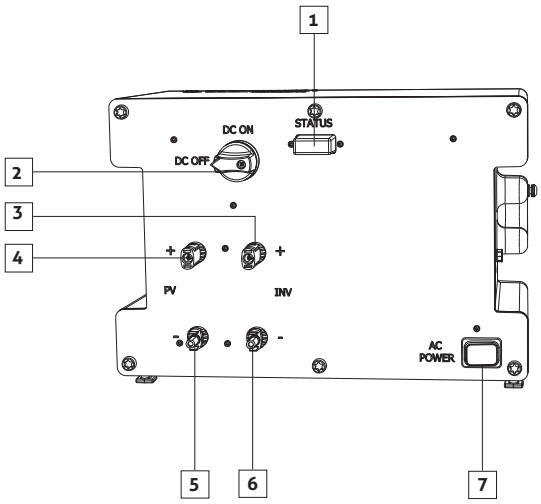
# System design

## Overall system configuration

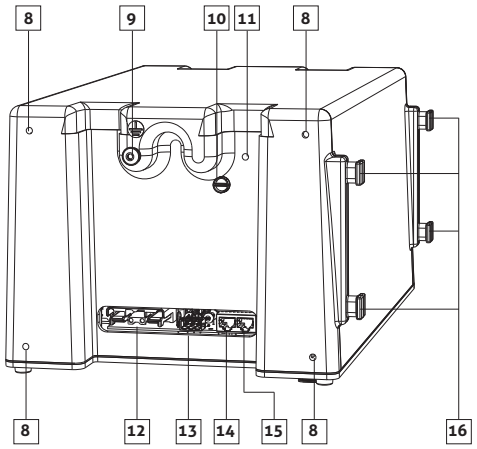



| | |
|---|---|
| 1 | MyReserve Command Cover (optional) |
| 2 | MyReserve Command 25 (converter) |
| 3 | MyReserve Pack (battery module) |
| 4 | Wall bracket |
| 5 | MyReserve Anti Theft Set (optional) |
| 6 | MyReserve wiring harness |
| 7 | MyReserve protective cover |

# MyReserve Command layout



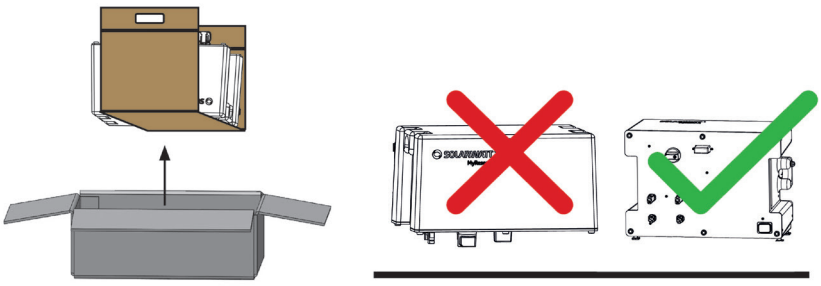

| | Label | |
|---|---|---|
| 1 | **STATUS** | Status LED/<br>Bluetooth antenna |
| 2 | **DC ON / DC OFF** | DC disconnector |
| 3 | **INV (+)** | Inverter positive terminal |
| 4 | **PV (+)** | PV string positive terminal |
| 5 | **PV (-)** | PV string negative terminal |
| 6 | **INV (-)** | Inverter negative terminal |
| 7 | **AC POWER** | AC power supply switch |



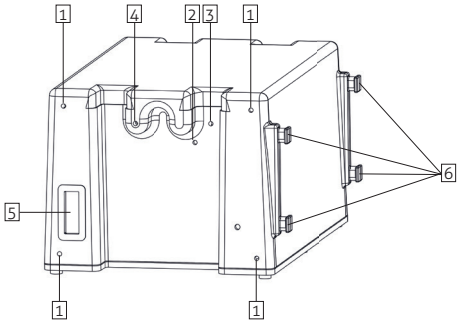

| | Label | |
|---|---|---|
| 8 | | Fastening holes for<br>protective cover |
| 9 | | Ground connection |
| 10 | | Optional fastening hole wiring harness MyReserve Command 20.2 |
| 11 | | Fastening hole wiring<br>harness MyReserve Command 25 |
| 12 | **BAT** | Battery connection |
| 13 | **AC**<br>L N ⏚ | AC power supply (230 V) |
| 14 | **LAN** | Data communication (RJ45) |
| 15 | **CAN** | Data communication (RJ45) |
| 16 | | Mounting bracket |

## ⚠ ATTENTION

Do not sit or position the MyReserve Command so that it rests on the connection plugs.

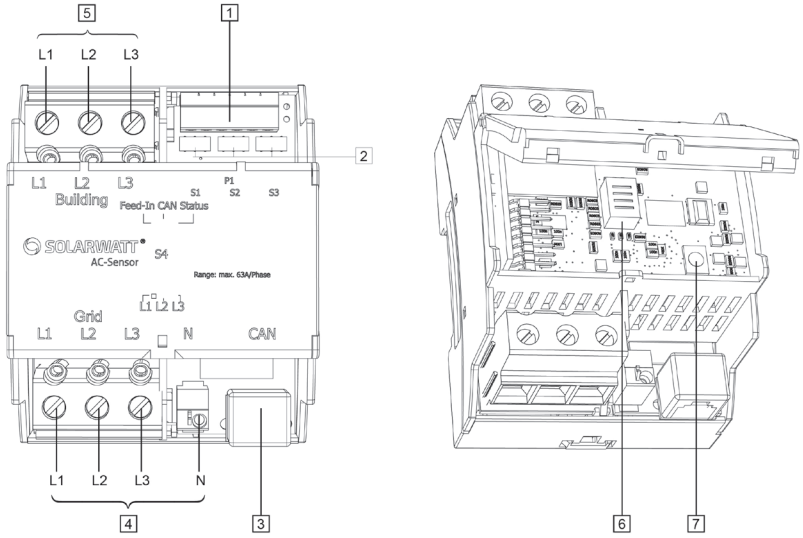


## MyReserve Pack battery module layout




| | |
|---|---|
| 1 | Fastening holes protective cover (M6x25 screws supplied) |
| 2 | Optional fixation hole for rubber seals of MyReserve Command 20.2 battery cable |
| 3 | Fixation hole for rubber seals of MyReserve Command 25 battery cable (M6x20 screws included) |
| 4 | Grounding / Earth connection |
| 5 | Connection socket for battery cable (covered when supplied) |
| 6 | Mounting lugs |

## AC Sensor Flex layout




| | |
|---|---|
| 1 | Connection terminal for external CT-clamps |
| 2 | DIP-switches S1, S2, S3 for activation of CT-clamp measurement |
| 3 | CAN connection MyReserve (RJ45) |
| 4 | Grid-side connections |
| 5 | House-side connections |
| 6 | DIP-switch S4 Current ratio settings |
| 7 | Reset switch |

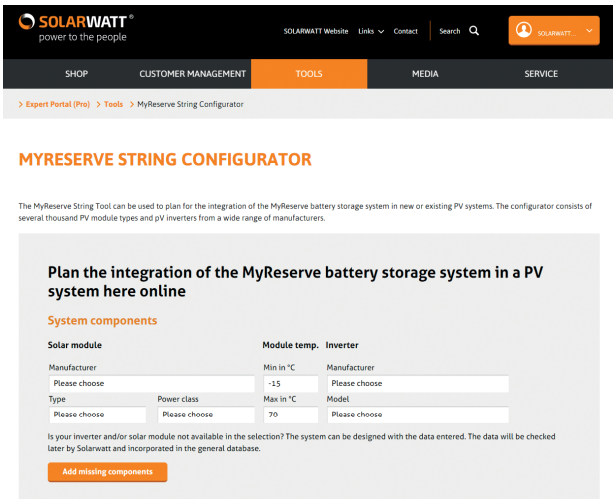
## System configuration

**IMPORTANT**

**Before you start!**

Always use the MyReserve string configurator for system planning to confirm the installation is suitable for the best operation of the battery system.

**UK:** The configurator is available in the Expert Portal (Pro) of our website www.solarwatt.com under the menu item 'Tools'.
**AUS:** The configurator is available in the Professional area of our website www.solarwatt.com.au under the menu item 'Tools'.




# Installation

## Requirements for the installation location

- Installation in splash water protected outdoor areas only if the installation steps for outdoor installation have been followed

If the installation steps for outdoor installation have not been followed, the following requirements apply:

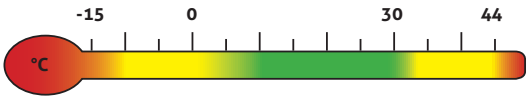
- Install the product in a cool, dry indoor space.
- Maximum relative air humidity 85%. Do not expose MyReserve to an environment that has higher air humidity.

Generally, the following requirements must be observed:

- Install the product either in a dry indoor space or a location protected from any precipitation
- Environmental temperature range for unlimited performance is approx. 0°C to 30°C
- Max. permissible environmental temperature range is approx. -15°C to 44°C.
- Do not expose the product to direct sunlight.
- Do not install MyReserve in emergency escape routes or bedrooms
- MyReserve must not block access to switching devices in the installation location.
- Install the product so that it is not accessible to children, mentally disabled persons or animals.
- The installation location must be chosen so that the product cannot be exposed to any type of flooding. This is assured with a sufficient installation height (minimum 30 cm from the floor) and a suitable drain-free or water-supply-free installation location.
- Do not store any flammable or explosive materials in the installation room.
- Installation in heater rooms (defined as heating systems for solid fuels with a total rated output of more than 50kW that may not be used for any other purposes), oil or wood storage facilities, wooden barns and sheds, etc. is not permitted.
- Do not use MyReserve in vehicles (motor vehicles, aircraft or ships)
- Do not use MyReserve in areas which are prone to explosion (flour dust, saw dust, etc.)
- Do not install MyReserve at locations over 2000m above sea level
- Do not install MyReserve in atmospheres that are corrosive or contain alkali and do not store corrosive or flammable materials in its vicinity
- Do not install MyReserve in environments with moisture / atmospheres having a high salt content, near heat sources or in areas at risk of fire
- The wall and fastening material must be able to bear a static load corresponding to the specified product weight.
- Do not place the MyReserve above or below other equipment.
- Keep it away from direct heat emitted by other equipment, and maintain the minimum safe distances to other devices specified by the manufacturers of those devices.

## NOTE

- There are no limitations on performance for the household in the range from appr. 0°C to appr. 30°C.
- While charging there is a power throttling on appr. +10°C and colder to zero at appr.-2°C.
- Operation does not take place below appr. -15°C or above appr. +44°C.
- Accelerated aging of the cells should be expected at temperatures above appr. +44°C.



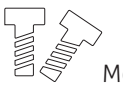

# MyReserve installation

## IMPORTANT

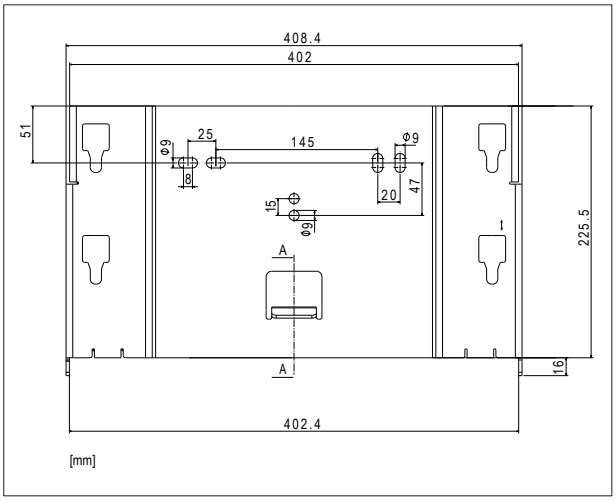
**Confirm the system weight!**
Ensure that the wall and the fastening materials can bear a static load corresponding to the specified product weight PLUS any future additional batteries.

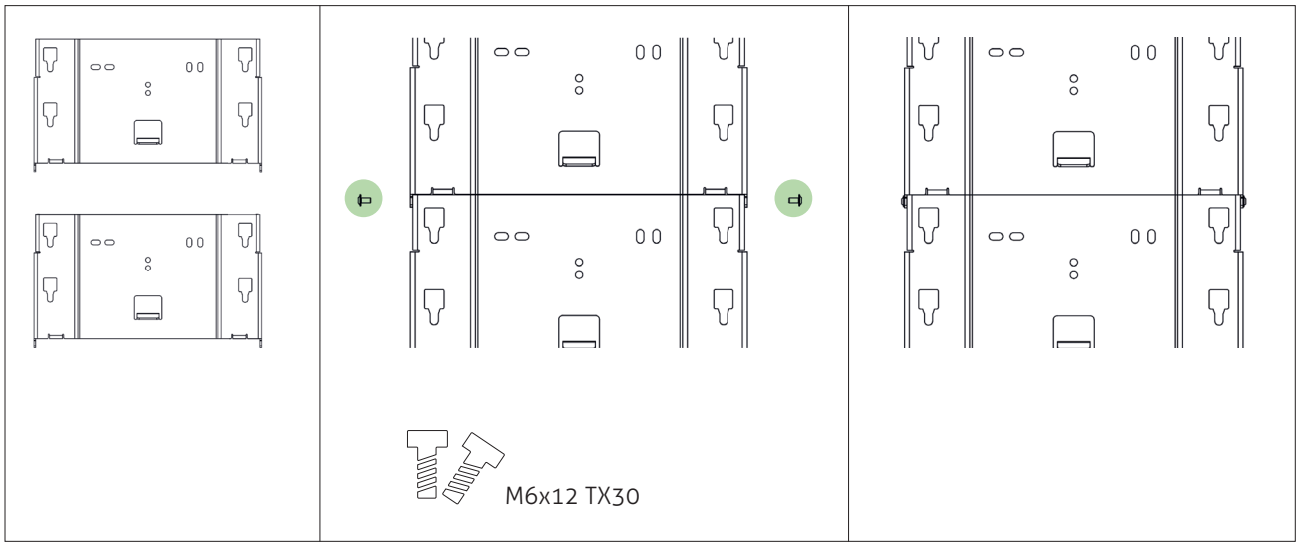
### Aligning the wall bracket

- Configure the wall brackets as depicted and fix them to wall with M6x12 TX30 screws (included in delivery)

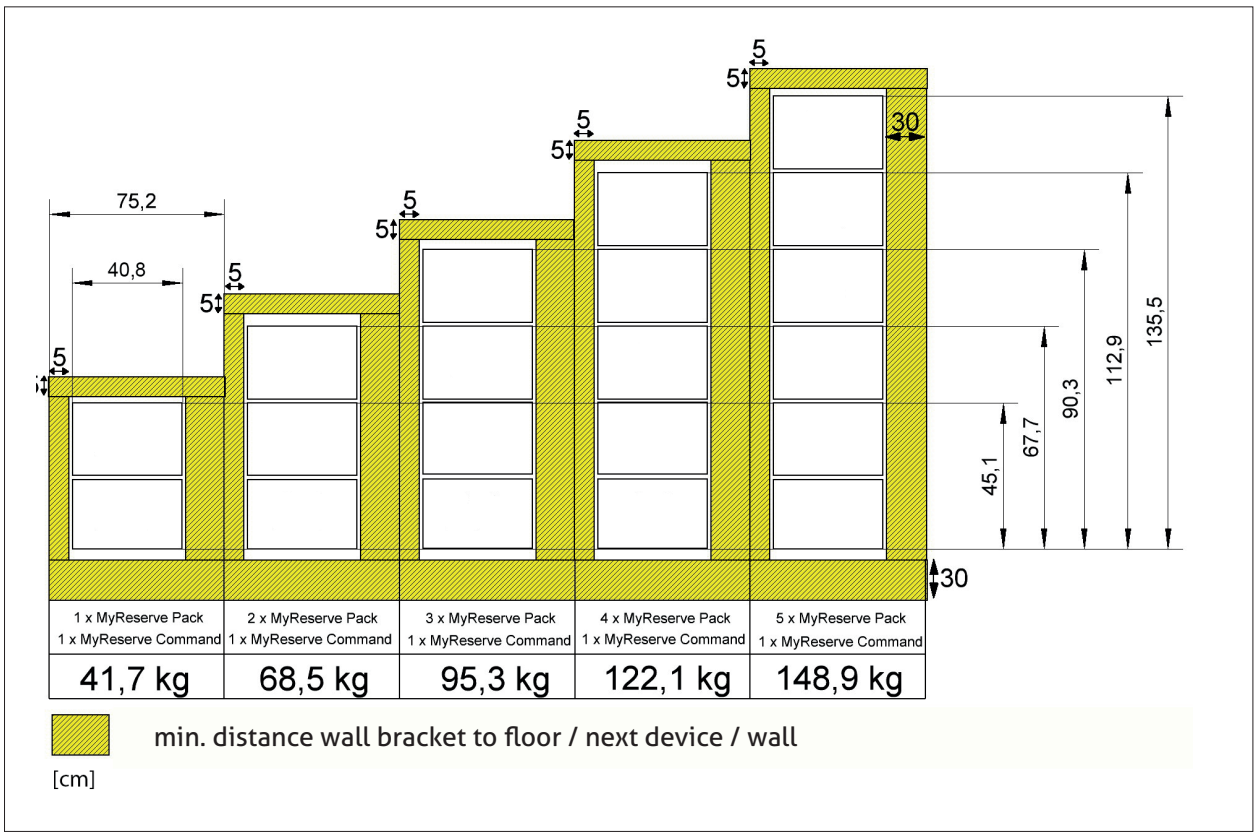


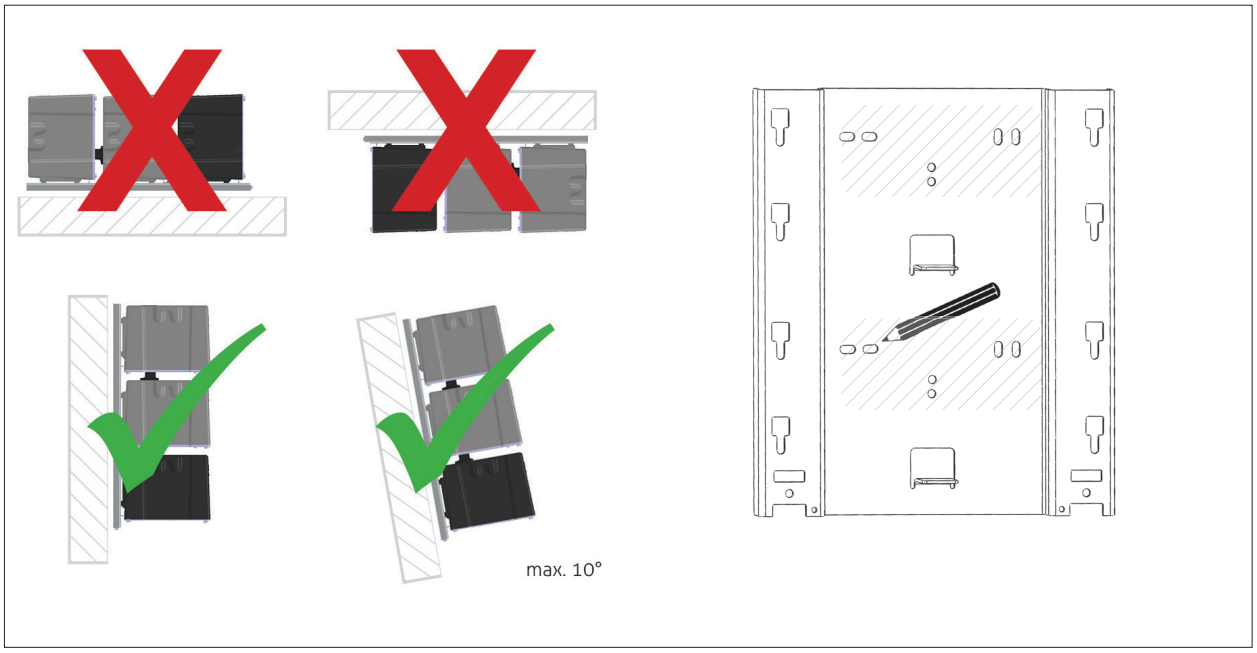
M6x12 TX30



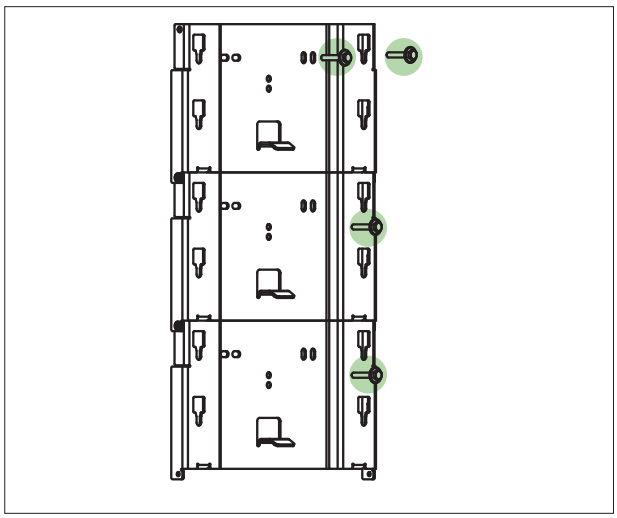



- Installation location must meet local standards
- Ensure that there is adequate space available for installation
- Choose the installation location to allow for future installation of additional battery modules as may be required (refer to the illustrated overview for wall bracket arrangement)
- Align the wall brackets horizontally
- Mark the required drill holes on the wall



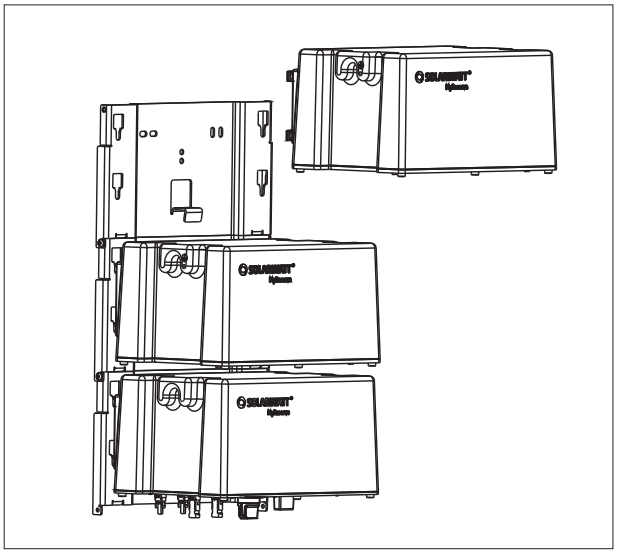



## Mounting the wall brackets on the wall



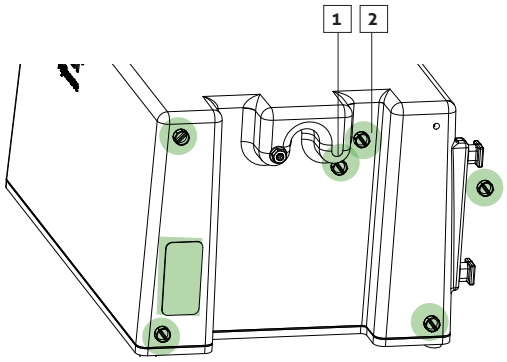
- Drill the necessary holes
- Choose fastening materials that are appropriate for the wall material and the load to be supported
- Attach wall brackets

### Bracket Installation of MyReserve Command and MyReserve Packs



- hang MyReserve Command on the lowest wall bracket in the bottom 4 recesses
- hang MyReserve Pack battery modules on the wall brackets from bottom to top

### Removing protective seals




| | |
|---|---|
| 1 | optional fastening hole for rubber seals of MyReserve Command 20.2 battery cable |
| 2 | fastening hole for rubber seals of MyReserve Command 25 battery cable |

- remove adhesive tape/yellow synthetic seals from MyReserve Command and MyReserve Battery Pack(s).

Depending on whether the MyReserve Command 20.2 or MyReserve Command 25 wiring harness is used, leave the seals in the fastening holes that are not used (see example MyReserve Pack in the figure).

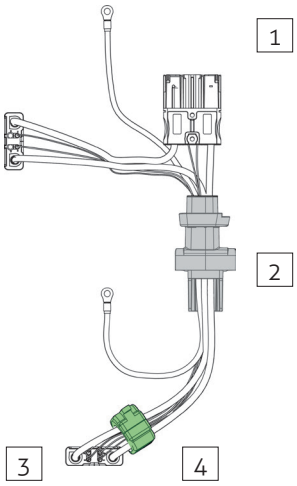
**NOTE**

Should it be necessary to return the product, reseal the holes with adhesive tape or similar material. If no suitable tape is available, slide the battery module carefully back into the packaging. Ensure that nothing, especially nothing metallic, could get into the battery module during transport.

## Connecting the battery cables

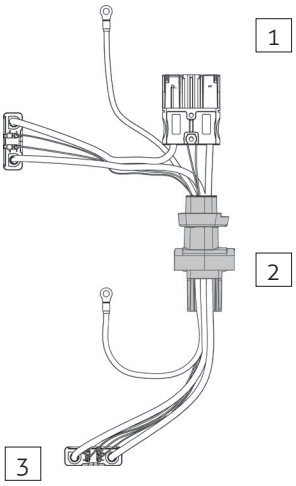
- note the correct alignment of the wiring harnesses

Wiring harness
MyReserve Command 25 to battery
(with pre-installed ferrite core)




| | |
|---|---|
| 1 | Top module |
| 2 | Rubber plug |
| 3 | MyReserve Command 25 resp. bottom module |
| 4 | Ferrite core |

Wiring harness
Battery to Battery

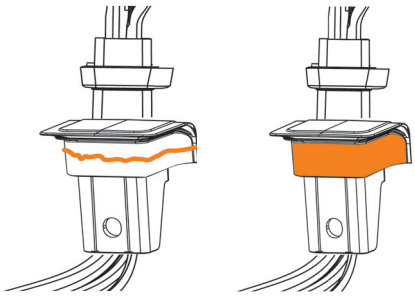



- press rubber plugs of all wiring harnesses firmly into place at all MyReserve Packs and MyReserve Command
- fix the plugs with M6x20 TX30 screws (included in delivery)

**IMPORTANT**

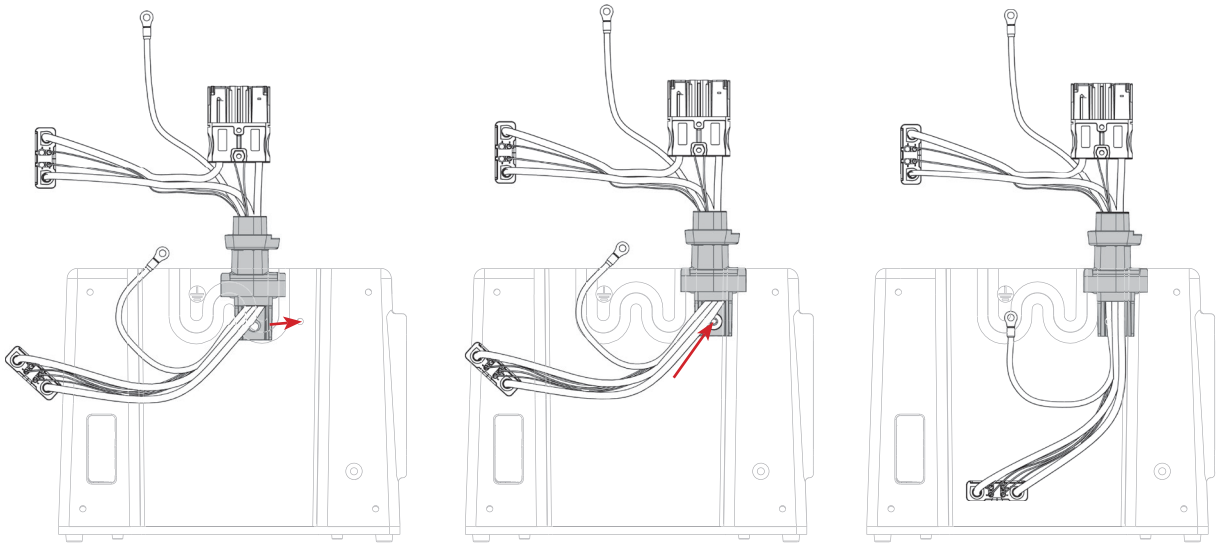
An excessively high torque can damage the threaded holes. Permitted torque min. 1.0 Nm to max. 1.2 Nm.

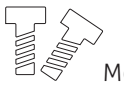
**NOTE**



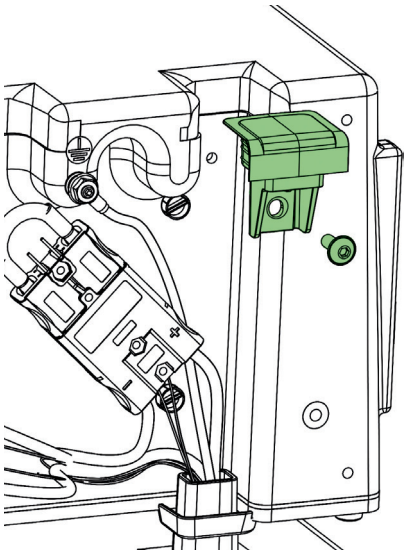
**For outdoor installation, cover the marked areas of the wiring harnesses with provided technical grease:**

- apply the technical grease with a thickness of approx. 2 mm to the area marked (left)
- spread evenly (right)

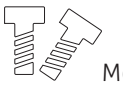




M6x20 TX30

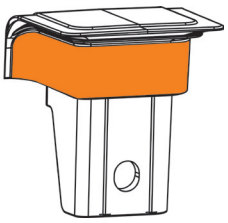


- attach MyReserve Pack seal rubber plug to the top battery module with a M6x16 TX30 screw (included in delivery)
- for outdoor installation: apply technical grease to plug



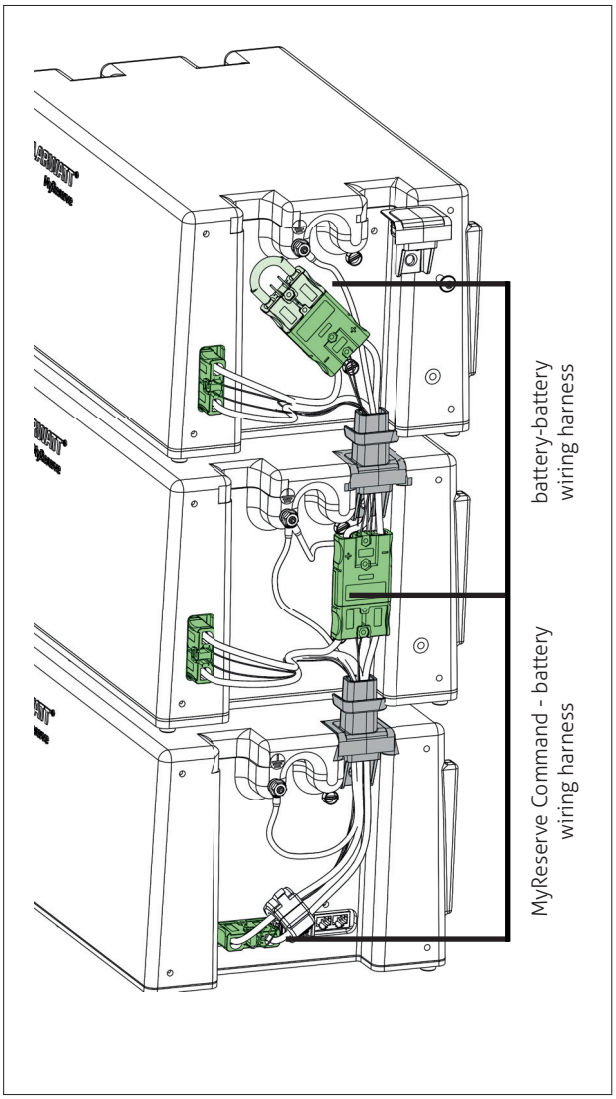
M6x16 TX30

## NOTE

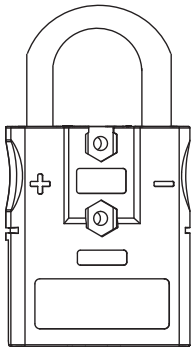


**For outdoor installation, cover the marked areas of the seal rubber plug with technical grease:**

- apply the technical grease with a thickness of approx. 2 mm to the area marked
- spread evenly




- connect the MyReserve Command to battery wiring harness to MyReserve Command
- connect the battery modules via battery-to-battery wiring harnesses from bottom to top
- Connect the strapping (terminating) plug to the last battery slot

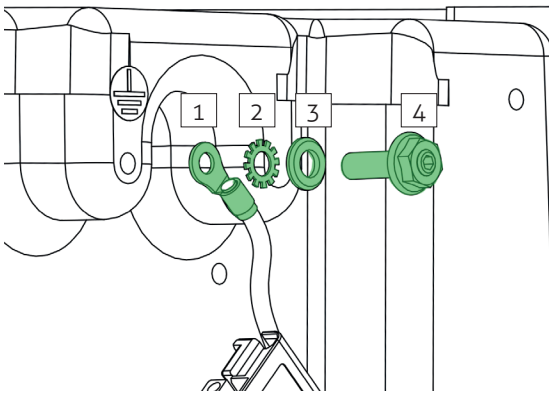



terminating plug

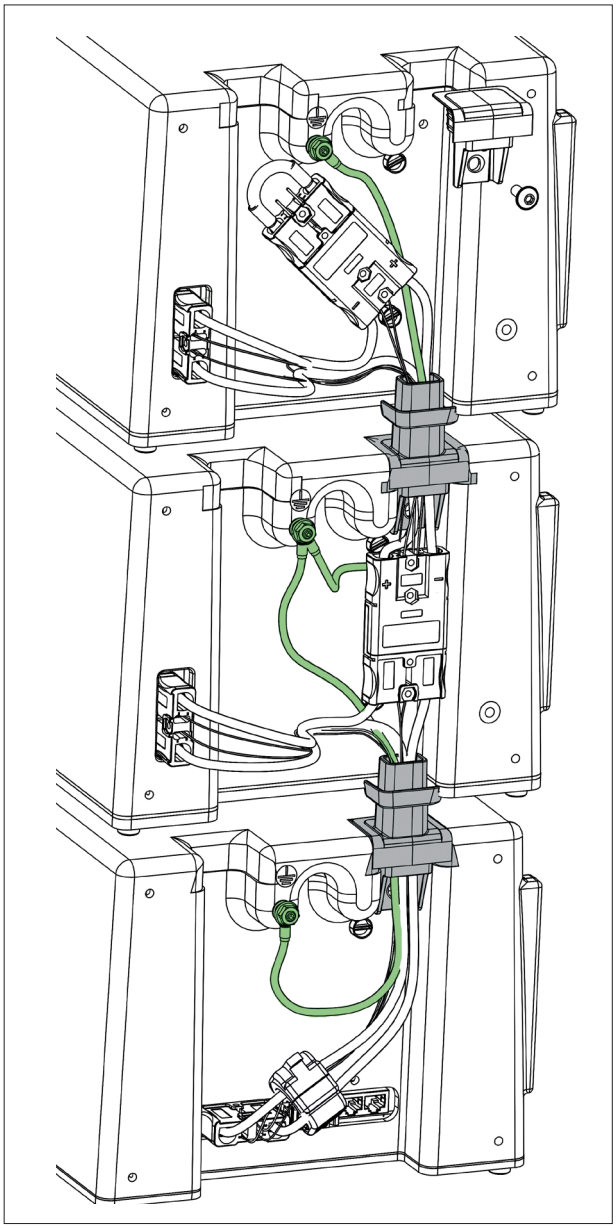
## ⚠ IMPORTANT

Make sure all battery module connectors are **COMPLETELY** inserted into their respective battery modules/MyReserve Command. Please see "Checking Connection of Battery Modules" (in the "Installation MyReserve" chapter).

## PE cable installation




| | |
|---|---|
| 1 | Serrated lock washer |
| 2 | Washer |
| 3 | PE cable lug |
| 4 | Grounding screw |



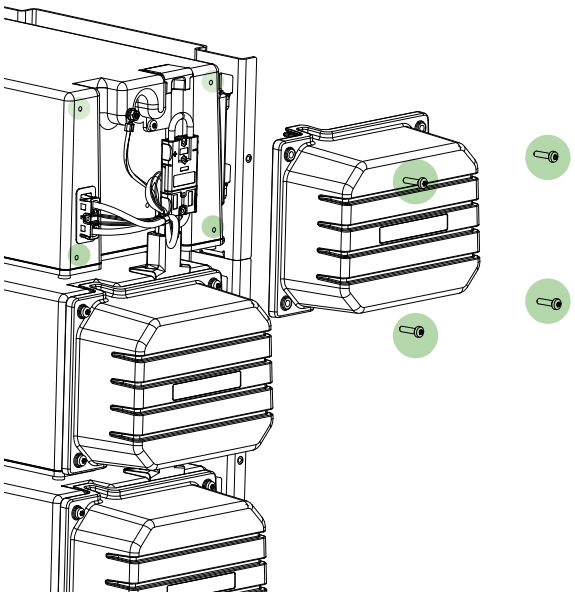
- loosen the grounding screw from MyReserve Command and battery modules
- mount the PE cable protection as shown in the illustration
- ensure good connection to the main building earth

Ensure earthing continuity!

**⚠ DANGER**

Life threatening danger if the grounding / earthing is not connected correctly or earth continuity is not proven!

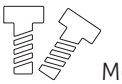
## Mount the MyReserve Pack protective covers



- attach the protective covers to the battery modules with M6x22 TX30 screws (included in delivery)
- ensure that the rubber plugs of the battery cable(s) seal the openings of the protective cover

**IMPORTANT**

An excessively high torque can damage the threaded holes. Permitted torque min. 1.0 Nm to max. 1.2 Nm.

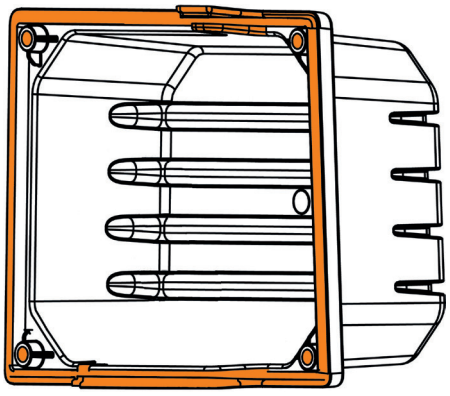


M6 x 22

**NOTE**

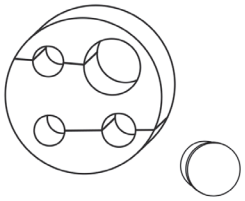
**For outdoor installation, cover the marked areas of the protective cover with technical grease provided:**

- apply the technical grease with approx. 2 mm thickness to the area marked
- spread evenly



## Pass the cabling through the MyReserve Command protective cover

- remove seal inserts and synthetic seals from the cable branch collector disc (included in the accessory kit)
- pass the AC-, CAN and LAN cable through the collector disc
- pass the AC-, CAN- and LAN cable through the MyReserve Command protective cover from below
- leave at least 15 cm cable length inside the protective cover
- place the seal insert around the cables
- close unused openings of the seal with the synthetic seals
- countersink the sealing insert in the cable branch collector disc



- Screw the cable collector disc tight (pliers or 41 mm wrench required)

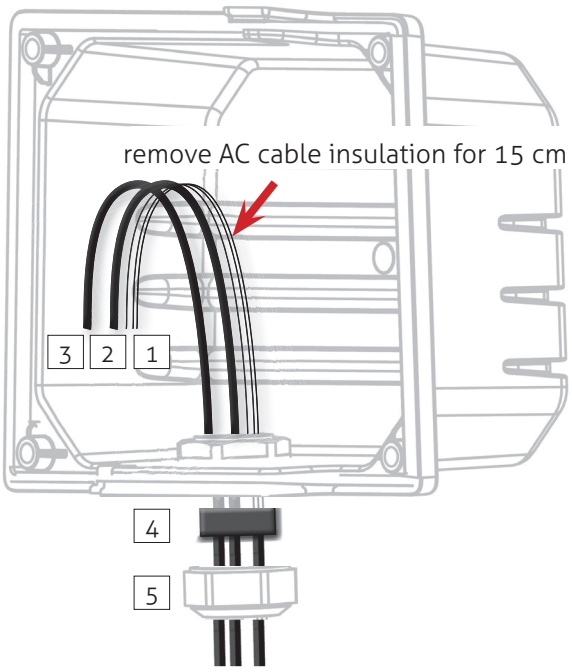
**NOTE**

Tightening of the cable branch should be stopped when the seal insert forms a bead which protrudes slightly over the union nut.

- Check the connectivity of the cables by gently tugging on them
- for less cable tension remove the insulation of the AC cable approx. 15 cm behind the cable collector disc

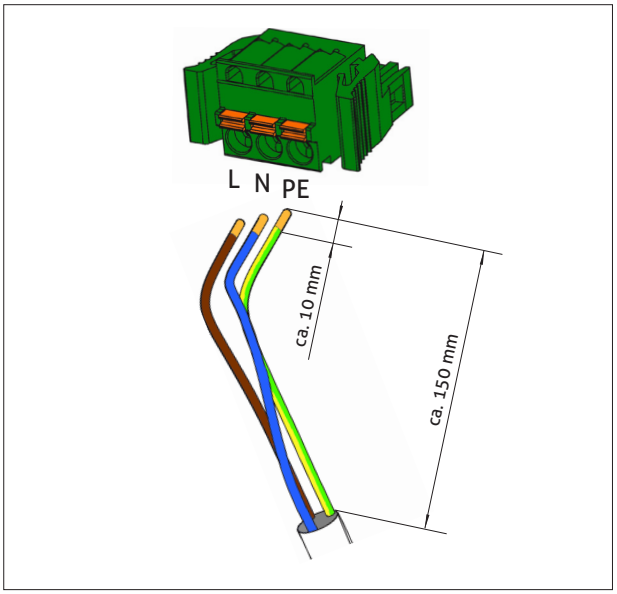
**NOTE**

For outdoor installation: use weatherproof and flexible cables.
**AC cable:** H07 RNF 3x1.5 mm² or alternatively with outer diameter of 9.2 - 10.7 mm.
**LAN/CAN cable:** minimum Cat5.e, outer diameter 6.0 - 6.5 mm, twisted pair cable




| | |
|---|---|
| 1 | AC cable (stripped), flexible |
| 2 | LAN cable |
| 3 | CAN cable |
| 4 | cable branch seal insert |
| 5 | cable branch collector disc |

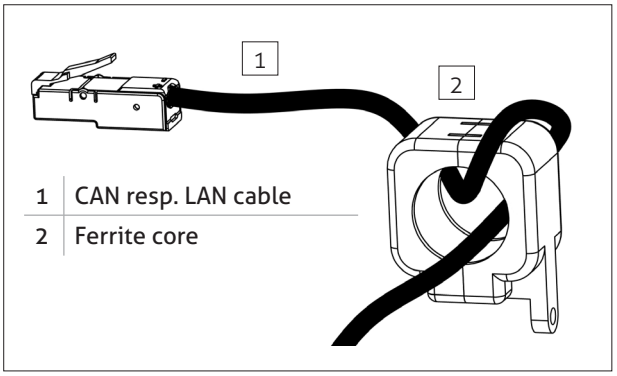
- remove 10mm of the insulation of the AC cable wires (N, L, PE)
- attach plug to AC cable




## Place split ferrite cores

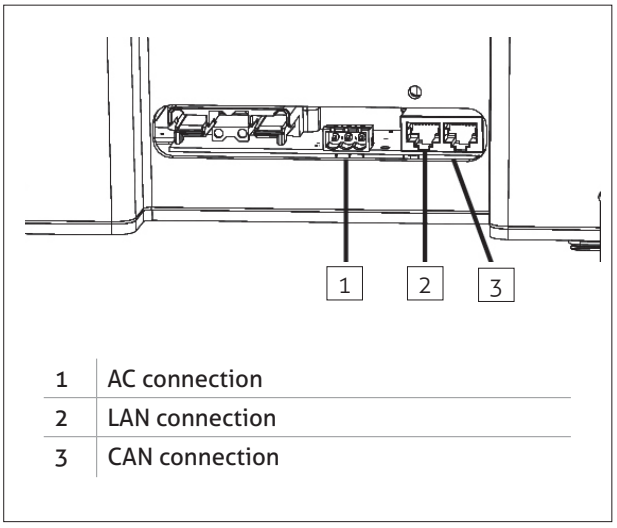
After the CAN and LAN cable have been passed through the MyReserve Command protective cover, both cables must be equipped with a split ferrite core.

- open both ferrite cores
- put a simple cable loop through the ferrite cores
- close ferrite cores

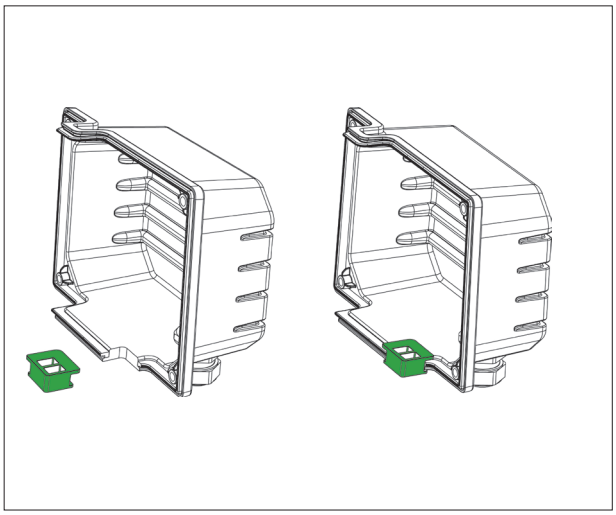



## AC and communication connection

- connect AC-, CAN- and LAN cables to MyReserve Command



## Mounting the MyReserve Command protective cover

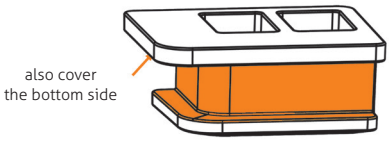


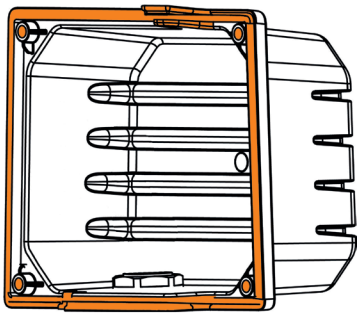
- place seal rubber plug on the MyReserve Command cover

### NOTE

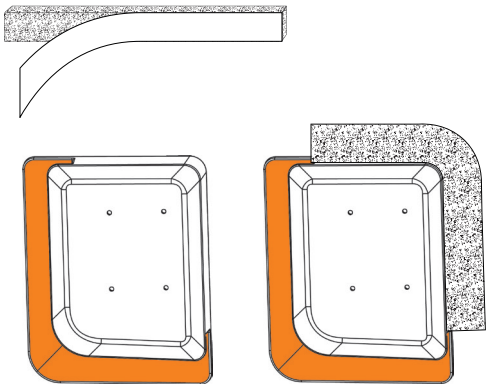
**For outdoor installation:**

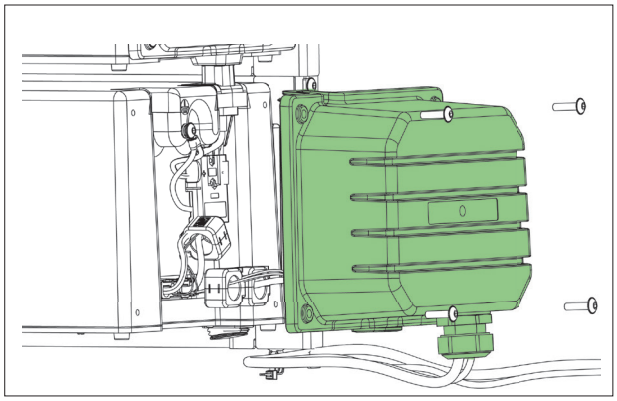
- cover the marked areas of the seal rubber plug and MyReserve Command Cover with Vaseline
- to apply the technical Vaseline, apply a portion of approx. 2 mm in diameter to the marked area and spread evenly



- attach the foam seal to the two remaining edges of the seal rubber plug

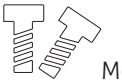




- attach the protective cover to MyReserve Command with M6x22 TX30 screws (included in delivery)

**⚠ IMPORTANT**

An excessively high torque can damage the threaded holes. Permitted torque min. 1.0 Nm to max. 1.2 Nm.

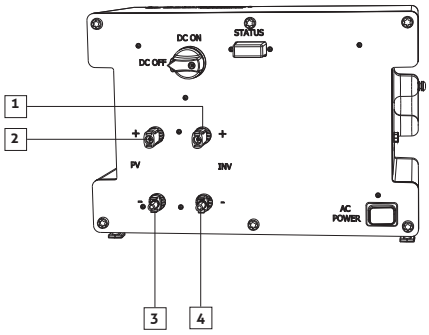


M6x22 TX30

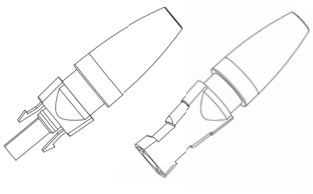
### Connection cable installation

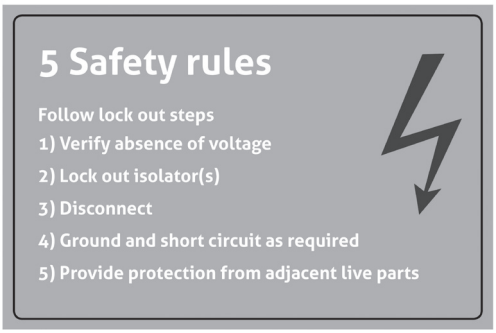
Ensure that the DC lead is de-energized and observe the 5 safety rules. Check the polarity of the DC cable for the PV system and the inverter.

- connect the connection cables as specified in the labeling provided on the MyReserve Command
- observe the correct assembly and path of the connection cables
- Observe the Weidmüller PV plug installation manual accompanying the WMC4 plugs




| | Label | |
|---|---|---|
| 1 | PV (+) | PV-String positive terminal |
| 2 | PV (-) | PV-String negative terminal |
| 3 | INV (+) | Inverter positive terminal |
| 4 | INV (-) | Inverter negative terminal |






**IMPORTANT**

Note the polarity on the MyReserve Command inputs and outputs.

**HAZARD**

**CAUTION!**

Ensure the device is isolated and powered down by checking the AC is OFF to the MyReserve Command before completing the cable installation. Switch off the DC cut-off switch (OFF).

### Establishing CAN communication between MyReserve Command and AC Sensor

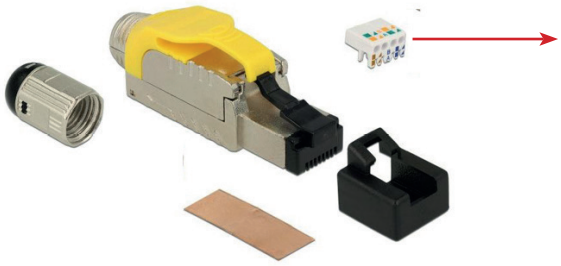
**NOTE**

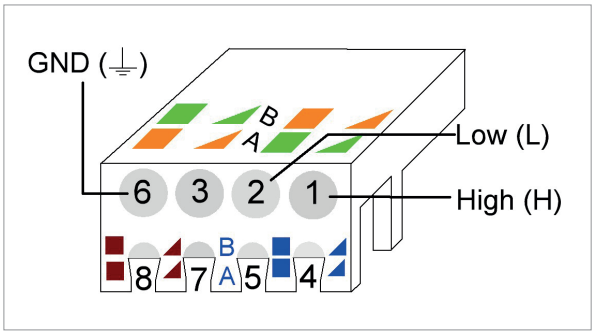
Always use a twisted wire pair of a network cable (minimum Cat.5e) for CAN H and CAN L. This improves shielding from interfering influences. The maximum possible cable length for the CAN connection is 100m. DO NOT run the CAN cable in the same conduit as the AC cabling.

- establish CAN communication between MyReserve Command and AC sensor via patch cable

**IMPORTANT**

If you use a network installation cable, the corresponding RJ45 connectors are available in the SOLARWATT web-shop (DELOCK 86287 RJ45 connectors).
Make sure that the pins H (pin 1), L (pin 2) and GROUND (pin 6) are connected to MyReserve Command and the AC sensor with the same assignment.

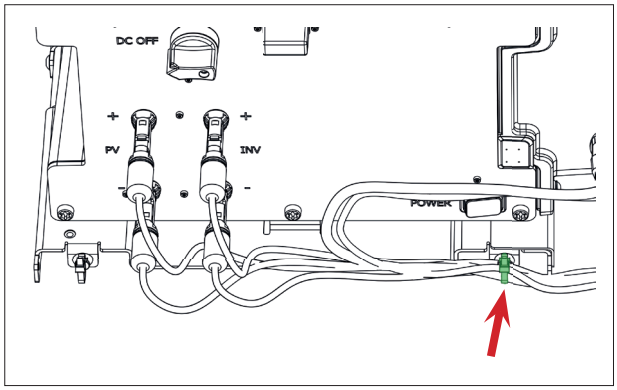





**NOTE**

When using the MyReserve Backup Power from SOLARWATT, the CAN connection is made via all pins. In any case, please refer to the wiring diagram in the MyReserve Backup Power Installation Instructions.

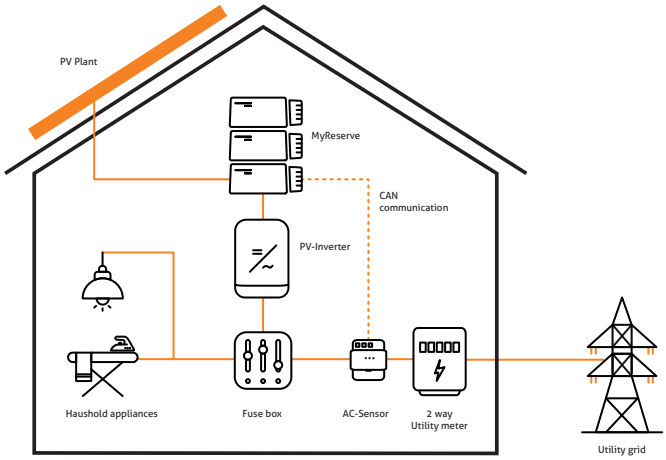
### Fixing installation cables

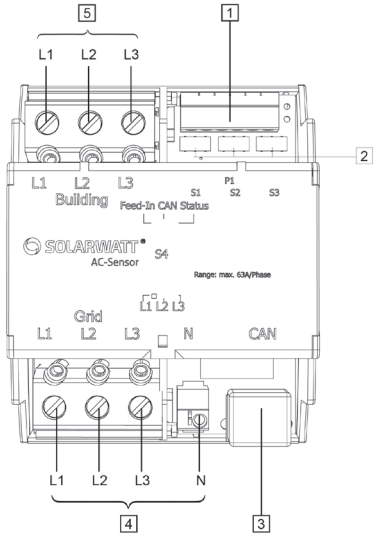


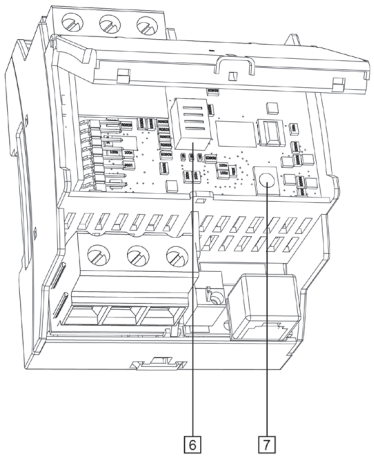

- attach two cable ties (included in delivery) on the lowest wall bracket
- Fix the installation cables with the cable ties

# Installation of the AC Sensor

The ACS is a bidirectional Current transformer that measures the electrical power for import and export, and communicates to the MyReserve battery storage system, which is then regulated accordingly.
The ACS is installed after from the retail meter.




| | |
|---|---|
| 1 | Connection terminal for external CT-clamps |
| 2 | DIP-switches S1, S2, S3 for activation of CT-clamp measurement |
| 3 | CAN connection MyReserve (RJ45) |
| 4 | Grid-side connections |
| 5 | House-side connections |
| 6 | DIP-switch S4<br>Current ratio settings |
| 7 | Reset switch |

## IMPORTANT

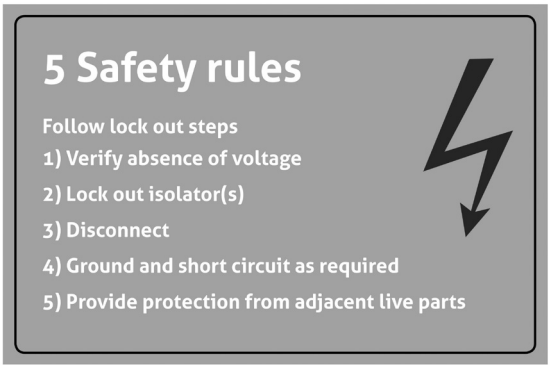
**Damage or destruction of the AC Sensor with improper use**
Connection of mains voltage to the CAN bus terminals can damage or destroy the device. The device can be damaged or destroyed if operated outside of it's specifications.

## DANGER

**Life-threatening danger due to electric shock**
Live parts carry extremely dangerous voltages. Only use the AC Sensor in a dry environment and keep it away from liquids. Only operate the AC Sensor behind a cover or with a protective guard in a switchboard or enclosure or similar. Disconnect the AC Sensor before cleaning it and only clean it using a dry cloth.
Extremely dangerous voltage runs through the household switchboard and wiring. Isolate all sources of supply and secure against re-connection before commencing any works. Test for the absence of ALL voltages BEFORE commencing any works with the ACS or other systems.

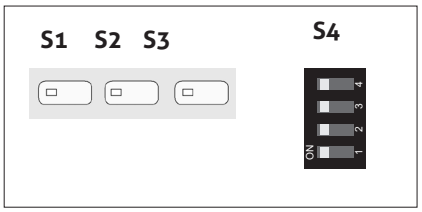
## IMPORTANT

Observe the 5 safety rules!



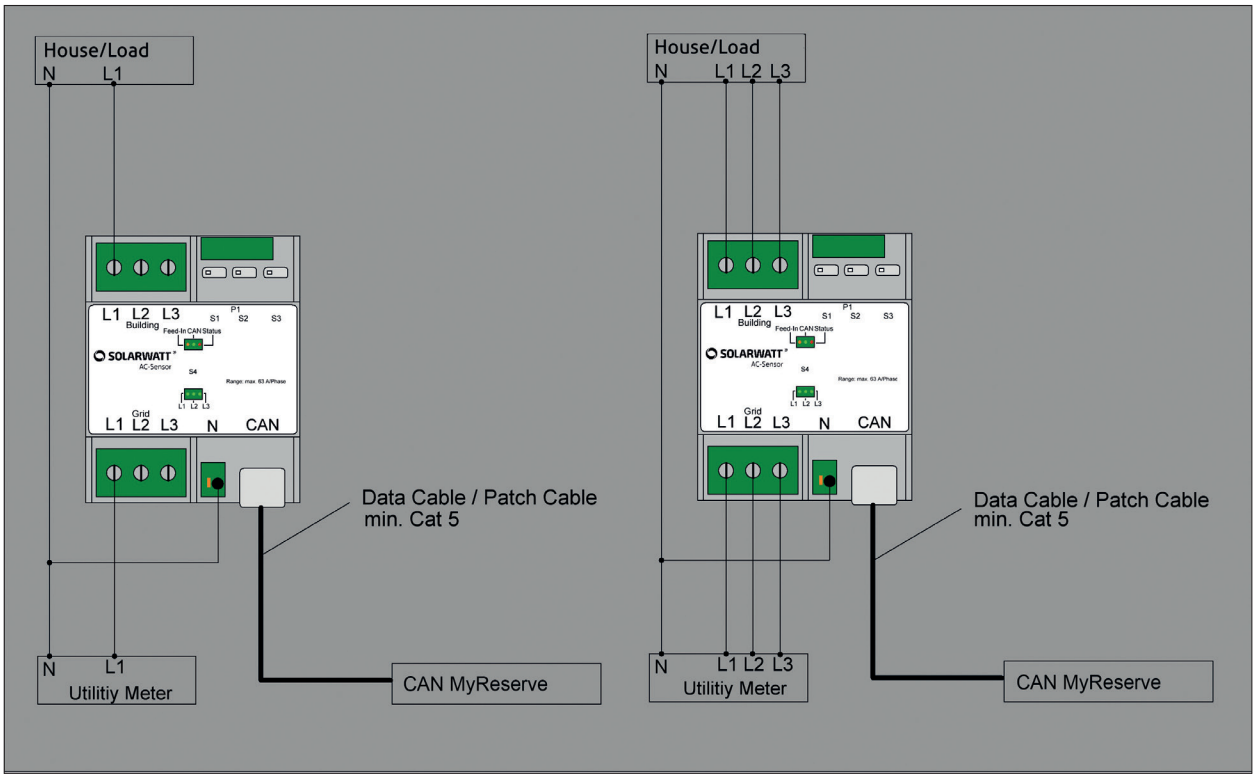
## Direct measurement

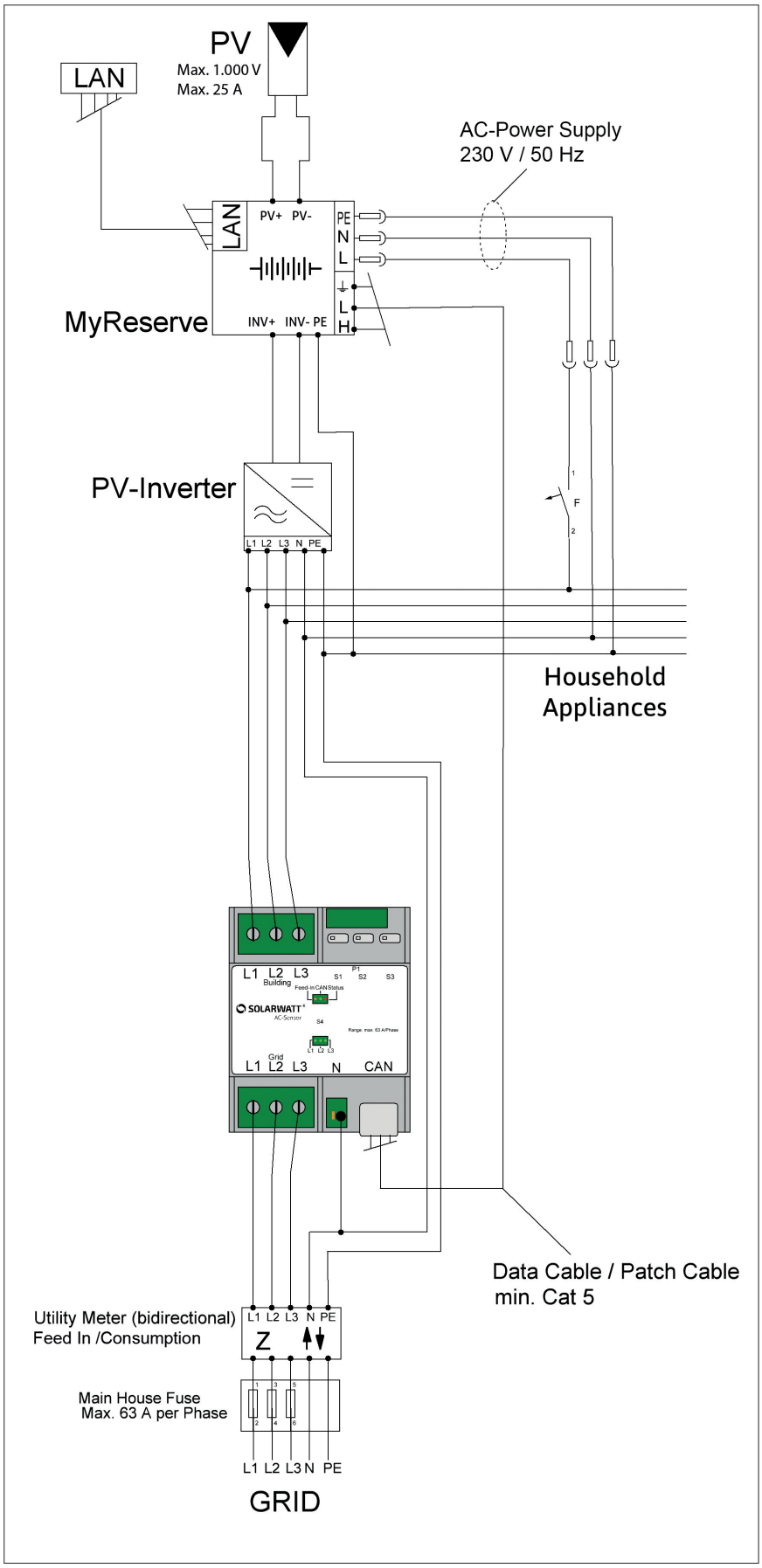
- Mount the ACS in a DIN-rail: hook the device on the upper edge of the DIN-rail and press down until it clicks in place.
- Connect the ACS according to the relevant wiring diagram ("single ACS", "ACS and MyReserve", "ACS, MyReserve and EnergyManager").
- Check DIP switch settings for S1, S2, S3 (for direct measurement, all three switches should be to the left) and DIP switch settings for S4 (ensure all four switches are ON (to the left)) under the case cover

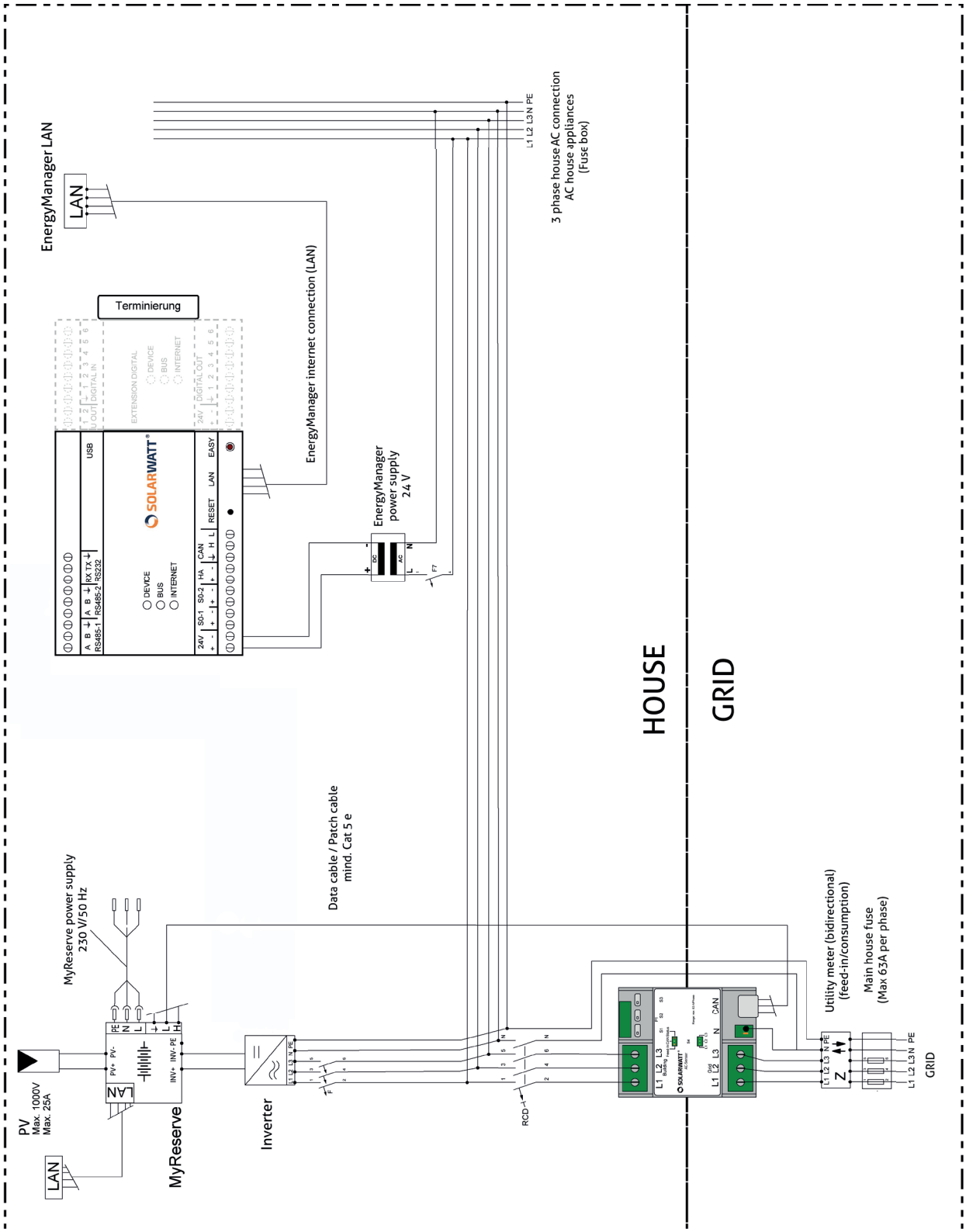



- Close/secure the case cover using the enclosed cable ties.

single ACS (1-phase, 3-phase)



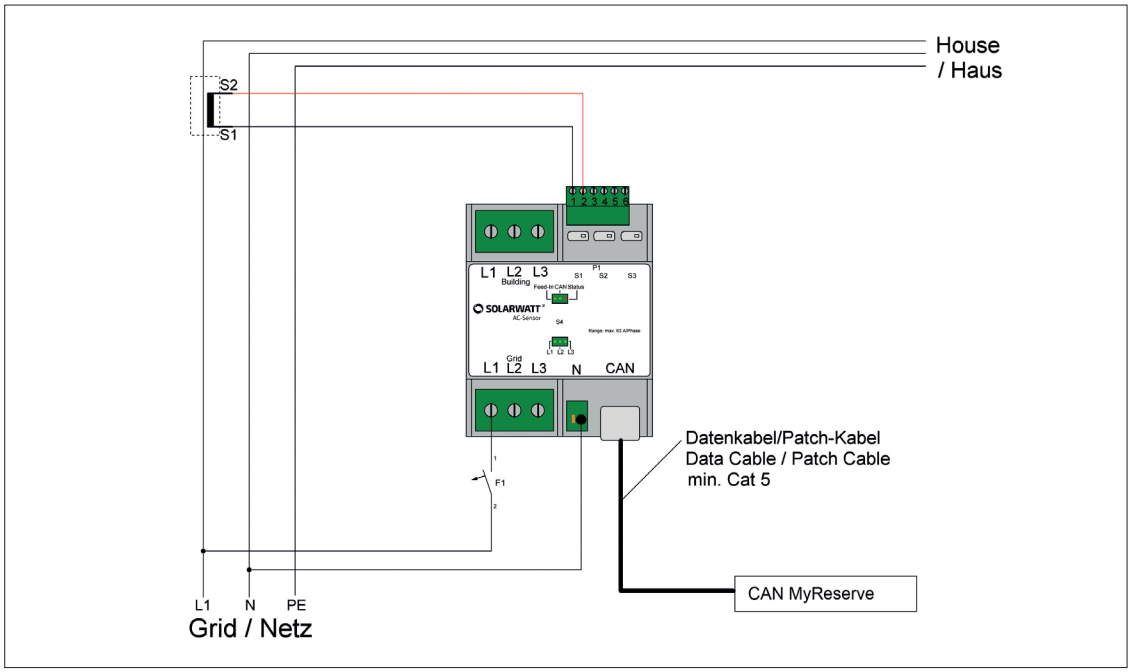

PV
Max. 1.000 V
Max. 25 A
LAN
AC-Power Supply
230 V / 50 Hz
LAN
PV+ PV-
PE
N
L
L
H
MyReserve
INV+ INV- PE
PV-Inverter
L1 L2 L3 N PE
F
Household
Appliances
L1 L2 L3
Building
S1
S2
S3
SOLARWATT
AC-Sensor
S4
Grid
L1 L2 L3
N
CAN
Data Cable / Patch Cable
min. Cat 5
Utility Meter (bidirectional)
Feed In /Consumption
L1 L2 L3 N PE
Z
Main House Fuse
Max. 63 A per Phase
L1 L2 L3 N PE
GRID



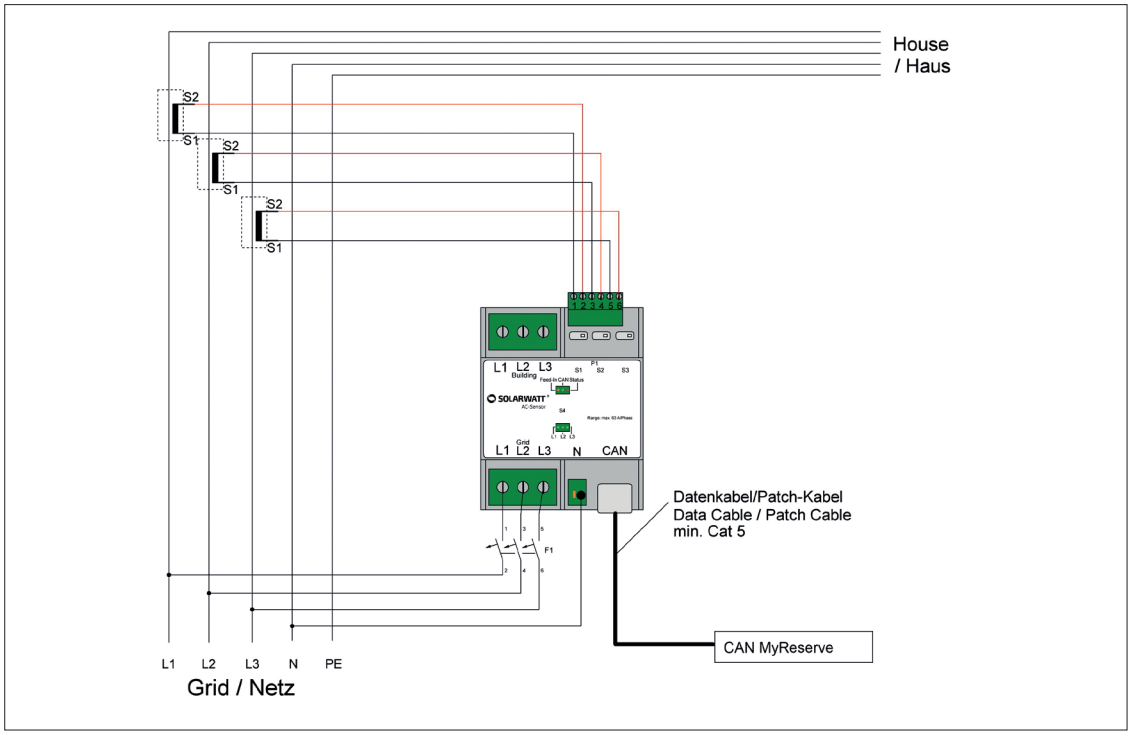
## CT clamp measurement

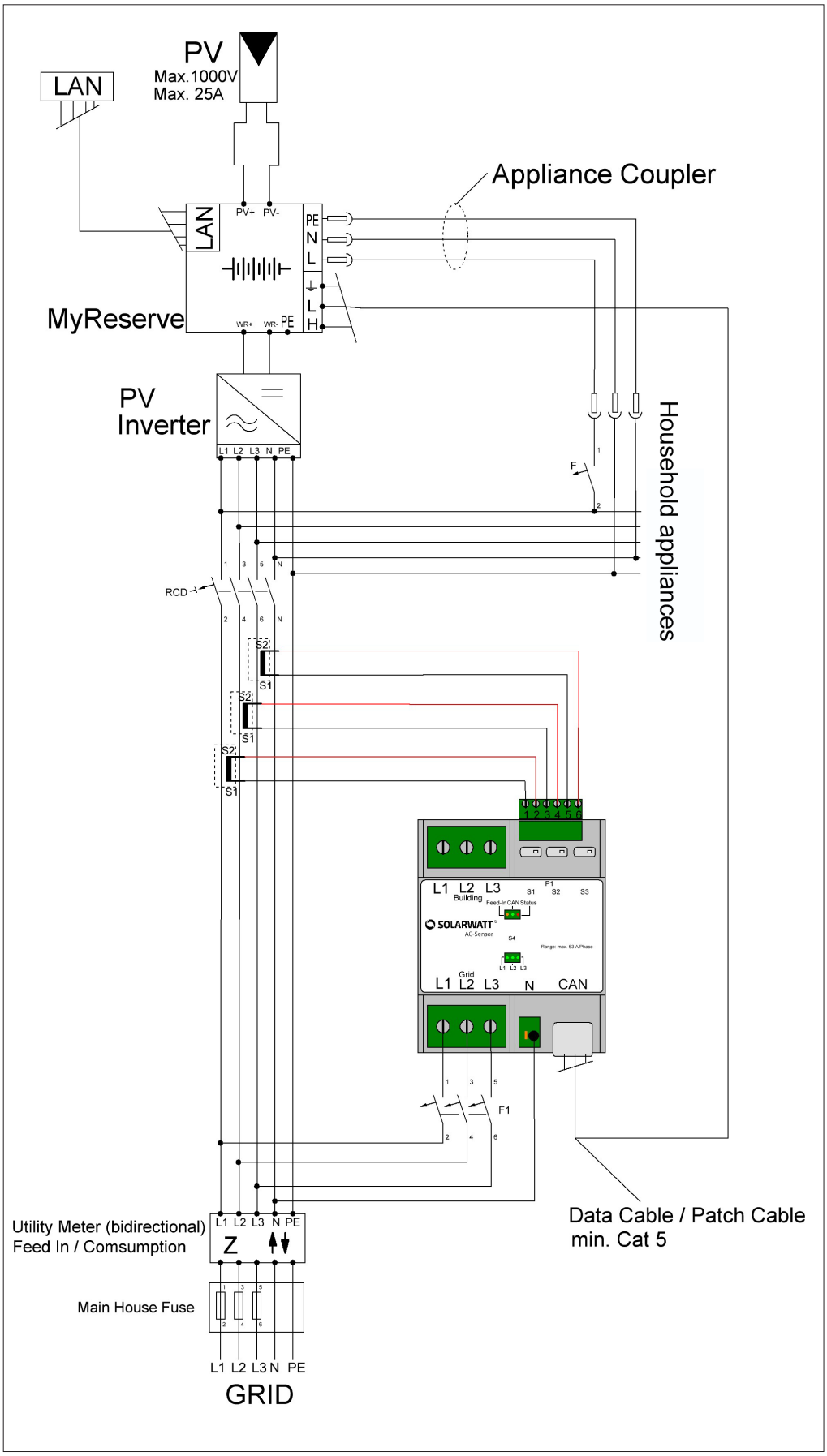
- Mount the ACS in a DIN-rail: hook the device on the upper edge of the DIN-rail and press down until it clicks in place.
- Connect the ACS according to the relevant wiring diagram ("single ACS", "ACS and MyReserve", "ACS, MyReserve and EnergyManager").
- Select fuse protection for the power supply cables according to the conductor cross section.

single ACS (1-phase)

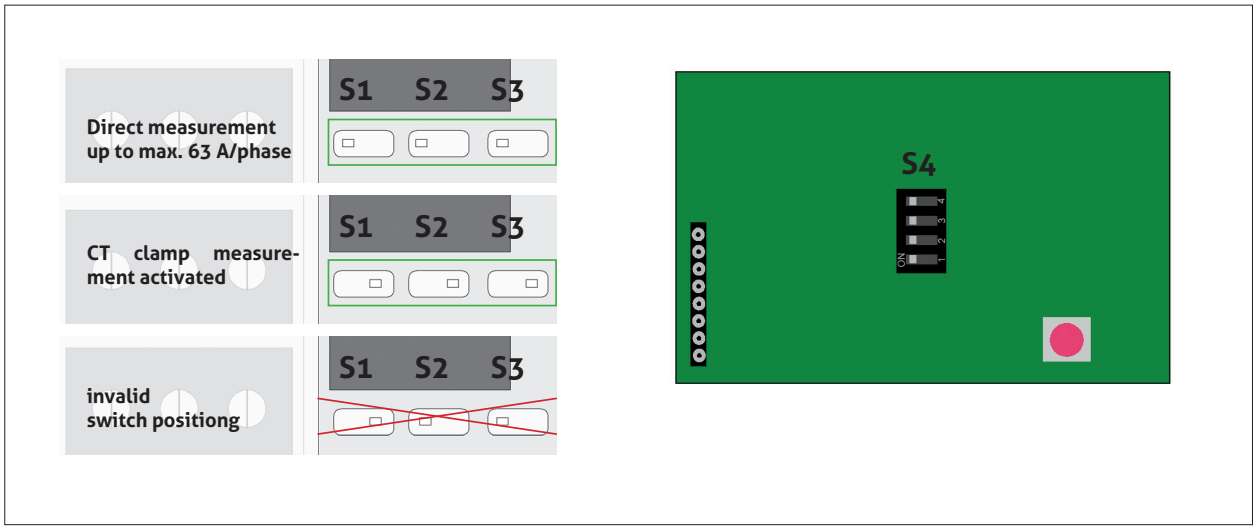



single ACS (3-phase)





- Activate CT clamp measurement via DIP switches S1, S2 and S3. All switches must be in the same position (see figure on the left).
- Set CT clamp ratio via DIP switch S4 (under case cover).
- See setting details in the table.
- Close/secure the case cover using the enclosed cable ties.




| | | | measurement method |
|---|---|---|---|
| 4 | ON |  | direct measurement max. 63 A / phase |
| 3 | ON | | |
| 2 | ON | | |
| 1 | ON | | |
| 4 | OFF |  | 75 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | ON | | |
| 1 | ON | | |
| 4 | ON |  | 100 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | ON | | |
| 1 | ON | | |
| 4 | OFF |  | 150 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | ON | | |
| 1 | ON | | |
| 4 | ON |  | 200 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | OFF | | |
| 1 | ON | | |
| 4 | OFF |  | 250 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | OFF | | |
| 1 | ON | | |
| 4 | ON |  | 300 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | OFF | | |
| 1 | ON | | |
| 4 | OFF |  | 400 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | OFF | | |
| 1 | ON | | |

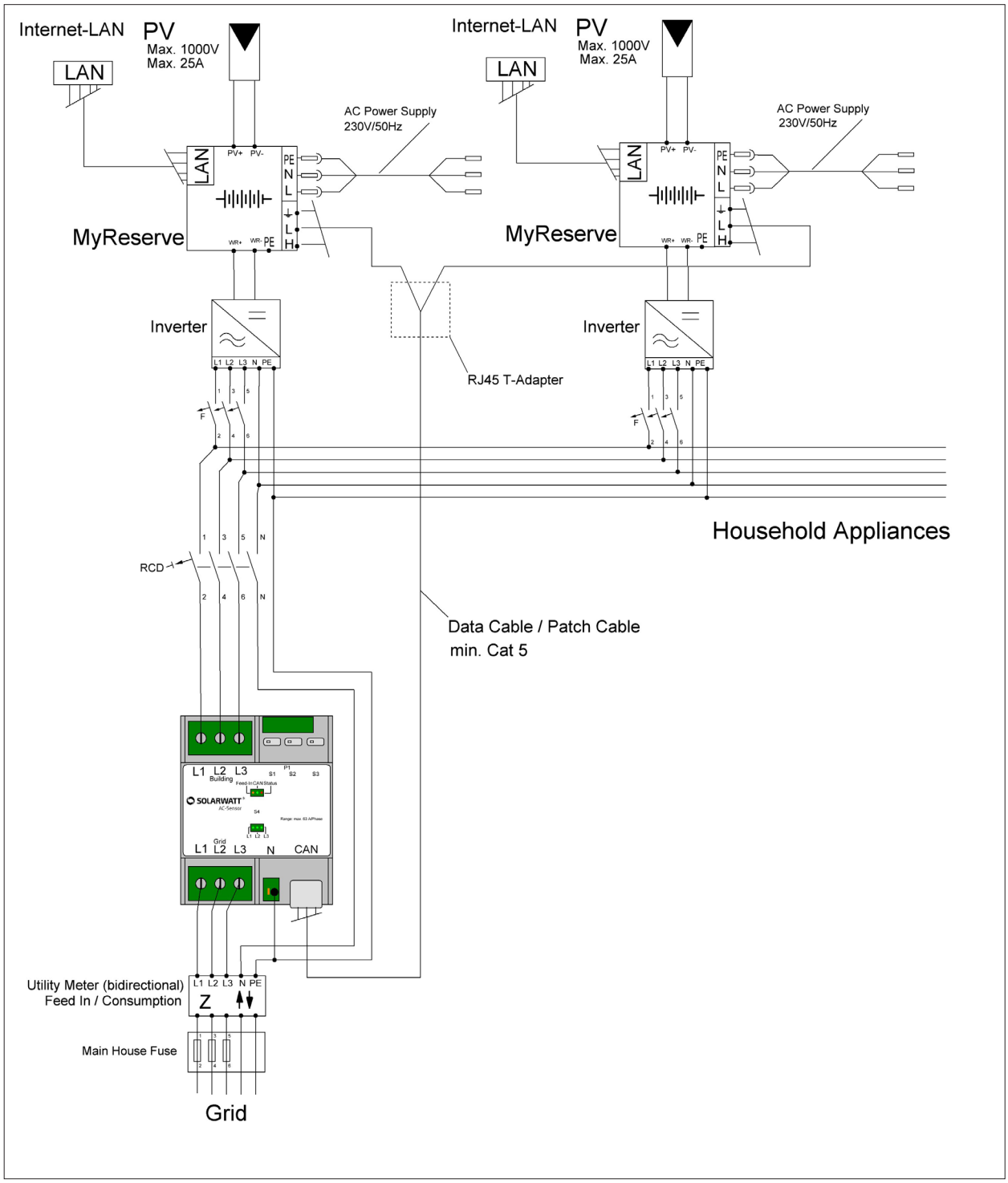
| | | | measurement method |
|---|---|---|---|
| 4 | ON |  | 500 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | ON | | |
| 1 | OFF | | |
| 4 | OFF |  | 1000 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | ON | | |
| 1 | OFF | | |
| 4 | ON |  | 1500 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | ON | | |
| 1 | OFF | | |
| 4 | OFF |  | 2000 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | ON | | |
| 1 | OFF | | |
| 4 | ON |  | 2500 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | OFF | | |
| 1 | OFF | | |
| 4 | OFF |  | 3000 A / 1 A CT clamp |
| 3 | ON | | |
| 2 | OFF | | |
| 1 | OFF | | |
| 4 | ON |  | 4000 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | OFF | | |
| 1 | OFF | | |
| 4 | OFF |  | 4500 A / 1 A CT clamp |
| 3 | OFF | | |
| 2 | OFF | | |
| 1 | OFF | | |

**NOTE**

The CT clamps must have a secondary current of ≤ 1 A and a minimum output power of 0.2 VA.

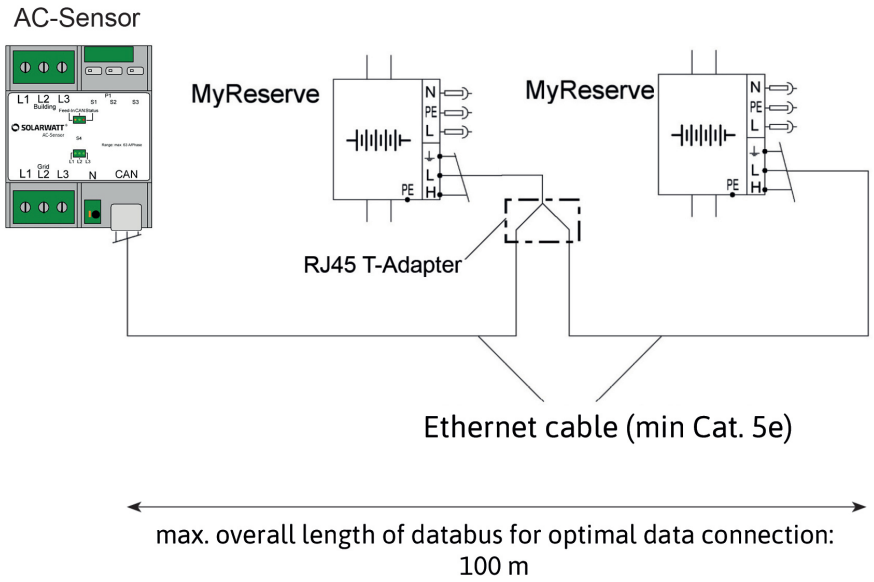
# Cluster system installation

You can operate up to six MyReserve Commands in one installation with an AC Sensor. Between one and five MyReserve Pack can be installed per MyReserve Command.

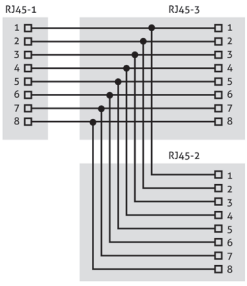


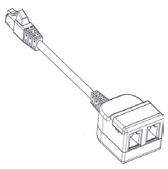
Communication coupling for the MyReserve as a cluster system is established via CAN BUS, using either Variant A (Fig.) or Variant B (Fig.).

**Variant A**




**NOTE**



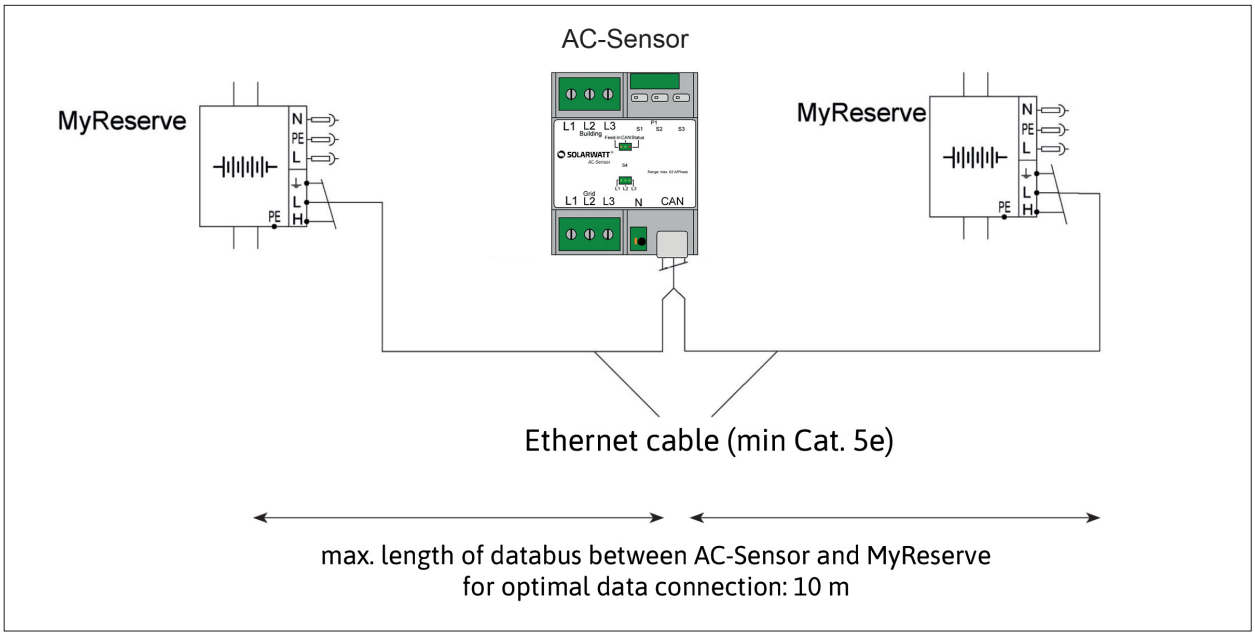



With Variant A, use an 8-pin 1:1 RJ45 T-adapter, following this schema (available in the SOLARWATT Webshop):

1-1-1 2-2-2 3-3-3 4-4-4
5-5-5 6-6-6 7-7-7 8-8-8

If you use a configurable plug, always use the same twisted wire pair for CAN H and CAN L.

**Variant B**



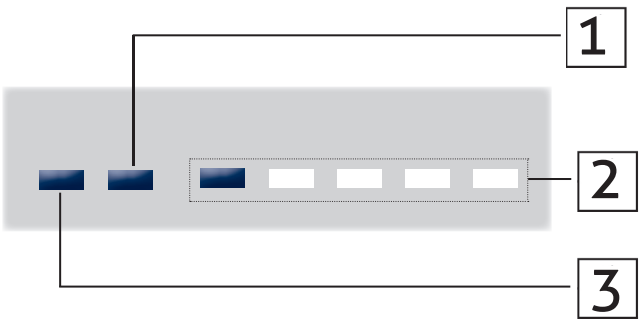

**NOTE**

If you use a configurable plug, always use the same twisted wire pair for CAN H and CAN L.

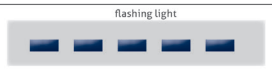
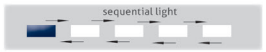
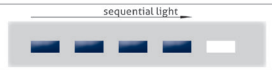
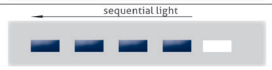
# Commissioning

## MyReserve Command LED indicator

You can view the status of MyReserve with the STATUS LED indicator below MyReserve Command. Refer to the "MyReserve Command LED indicator" overview below for a description of the LED codes.




| LED indicator | |
|---|---|
| 1 | Status LED |
| 2 | Performance LEDs |
| 3 | Bluetooth LED |

| | Display | | State |
|---|---|---|---|
| Bluetooth | Status | Performance | |
| | blue | | operational |
| | blue flashing light |   | RfG county settings not activated |
| | blue |   | update (Com Board) |
| | bla |  | state of battery charge 0 - 20 % |
| | blue |  | state of battery charge 21 - 40 % |
| | blue |  | state of battery charge 41 - 60 % |
| | blue |  | state of battery charge 61 - 80 % |
| | blue |  | state of battery charge 81 - 100 % |
| | blue |   | charging in progress |
| | blue |   | discharging in progress |
| | green | when switching on:<br>MyReserve test routine | see: „Checking Connection of Battery Modules“ |
| | green |  | update (Power Board) |
| | green | any state of charge<br>charging / discharging | no data is received from the AC sensor* |
| | red/yellow<br>flashing light | | reboot |
| | red/yellow | | error, manual reboot required |
| | red/yellow |  | **relais error:**<br>manual reboot required/Service required |
| | red/yellow |  | **BMS error:**<br>manual reboot required/Service required |
| | red/yellow |  | **MyReserve Command error:**<br>manual reboot required/Service required |
| | red |  | **CAN bus error:**<br>short circuited, check CAN cabling/reboot |
| | red |  | out of operation, service required |
|   | | | Bluetooth connection established |
|   | | | Bluetooth operational but not connected |
|  | | | Bluetooth inactive |

* The system operates autonomously, because no data is received from the AC Sensor. Charging and discharging take place according to a predefined strategy. Charging takes place during the day and discharging takes place during the night. Once communication with the AC Sensor has been re-established, the system automatically switches to regulated normal operation.

## Switching on MyReserve Command

1. Start the inverter using the manufacturers starting procedures.
2. Close the DC isolator switch of the inverter.
3. Turn the DC isolator of MyReserve Command to the ON position.
4. Check if PV voltage is applied to the inverter (associated MPP tracker).
5. Wait until the inverter has found its operating point.
6. Switch on the AC power supply of the MyReserve Command (green POWER toggle at the MyReserve Command 25 bottom plate).

**NOTE**

On initial commissioning, a charge or discharge of the MyReserve only occurs if the electric current on connected PV string is >0.3A and the installation location for the RfG country assignment is set.
Neither charging nor discharging occurs if these conditions are not met and MyReserve will remain in standby mode.

## Checking Connection of Battery Modules

After switching on the MyReserve a test routine is conducted to check the connection of the battery modules. The results are indicated over the LED display of the MyReserve Command:
When the system is started, the status LED is initially green for 5 seconds .
If the status LED continues to show green after more than 5s, turn OFF the MyReserve and check the connectors for proper connection. To repeat the Test routine then restart the MyReserve Command.

# Important settings in the MyReserve App

### Install MyReserve App including Pro functionality

- Download MyReserve App

MyReserve App für Android

MyReserve App für iOS

- Activate Pro functionality of the app

**HINWEIS**

To activate the pro functionality of the app, log in to the pro area of solarwatt.com. Under Tools/MyReserve App, download the MTX file to your mobile device in order to use the Pro functionality.

### Connect MyReserve Command via Bluetooth

- open MyReserve App
- using the menu, choose connection settings and select Bluetooth
- device will scan
- all available MyReserve Commands are shown with a 4-digit BLUETOOTH device number. You will find the BLUETOOTH device number on the nameplate above the QR code of the MyReserve Command Select MyReserve Command
- Connect
- enter the last 6 characters of MyReserve Command serial number manually or scan QR Code of serial number
- confirm serial number

### Set installation location (necessary for RfG country assignment)

**HINWEIS**

At initial commissioning, the installation location for the country allocation (RfG) must be set. Until this setting has been made, the status LED on MyReserve Command will flash blue.
The country setting is retained during later updates and does not need to be set again.

- using the menu, choose the connection settings and then **Pro Options/Installation Location**
- select country of installation
- confirm selection
- MyReserve Command LEDs: Status LED will change from flashing to permanent blue, Performance LEDs show the current status according to the operating status

## Switching off MyReserve Command

1. Switch off the AC power supply of the MyReserve Command (green POWER toggle at the MyReserve Command 25 bottom plate).
2. Turn off the inverter by following its shutdown sequence.
3. Turn the DC isolator of MyReserve Command to the OFF position.

**⚠ HAZARD**


Remember that charged capacitors pose an electrical hazard. A discharge time of 5 minutes must be observed after shutting down the MyReserve Command before work on the device can take place.

## Important settings on the PV inverter

Additional functions that ensure the optimum operating point of the inverter, even in partially shaded PV systems, must be deactivated on the inverter. Otherwise, unfavorable voltage levels may occur.
Examples of shadow management functions are **OptiTrac Global Peak or ShadeFix on SMA** devices or **Dynamic Peak Manager from Fronius.**
Follow the instructions in the inverter manufacturer's user manual to deactivate these functions.

**⚠ IMPORTANT**

The changing of any Settings on the PV inverter may only be made when the MyReserve is switched OFF. Non-observance can cause equipment damage.
Disconnect the AC supply on the MyReserve.
The DC cut-off switch on the MyReserve remains switched ON so that the inverter remains awake and setting changes can be made on the PV inverter.

# Monitoring

There are two ways to visualize and monitor MyReserve data:

1. via the MyReserve App
2. via network integration with the EnergyManager - monitoring of all energy flows in the household and comprehensive energy management (remote maintenance service possible via SOLARWATT)

## Monitoring via MyReserve App

MyReserve App for Android

MyReserve App for iOS

End-customers can see

- the generation of the PV string connected to MyReserve
- the charging and discharging power of the MyReserve
- the SoC (State of Charge)
- the feed-in power or the supply from the grid
- setting of backup capacity when installing the MyReserve Backup Power

Function extension Pro for installers

- Access to special analysis tools
- Test mode to check the system functionality by controlling charging and discharging
- Easy and convenient firmware update to all installed MyReserve devices via Bluetooth
- System analyses via parameters monitoring such as cell voltage, temperature and status messages
- Country specific parameter settings of the MyReserve Command 25

**NOTE**

With an access to the Pro area of www.solarwatt.com you have access to the function extension for installers. To do so, download the MTX file available under Tools/MyReserve App to your mobile device. This will unlock the Pro functionality.
The page also provides further important information and instructions for using the MyReserve App.

## Monitoring via network integration with the EnergyManager

For integration of the MyReserve into the EnergyManager, please follow the EnergyManager instructions or refer to the installation instructions for the EnergyManager in the download area of our website www.solarwatt.com.

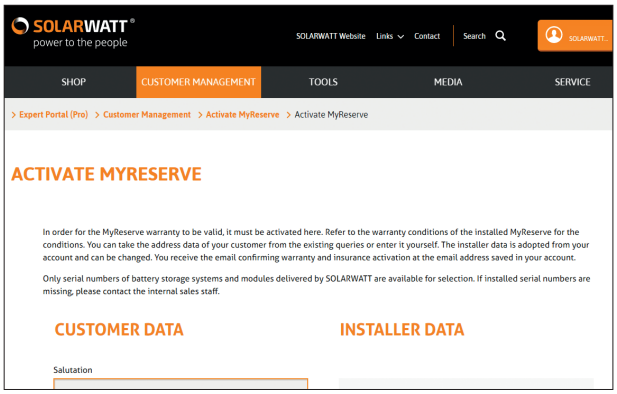
**NOTE**

You can find a wiring diagram for the electrical connection in the appendix: Circuit diagram MyReserve with EnergyManager.

# Warranty activation

**UK:** In order to activate the product warranty for the MyReserve, go to the Expert Portal (Pro)/Customer Management/Activate MyReserve/Activate FullCoverage and guarantee at www.solarwatt.com.
**AUS:** In order to activate the product warranty for the MyReserve, go to Professionals/Tools/Warranty Activation at www.solarwatt.com.au.

Please enter all the required customer information for warranty activation.




# Cleaning / maintenance & care

### Cleaning

**IMPORTANT**

**Damage to the data plate of the MyReserve with use of unsuitable cleaners.**
Do not clean the MyReserve with alcohol or other chemical cleaners. Only use a clean damp rag with a mild detergent or similar to clean the device.

### Maintenance work on the overall system

MyReserve is maintenance-free. The following must be observed for the inspection and maintenance of a PV system in combination with a MyReserve:

- Only inspect/maintain the PV system with the AC voltage supply to the MyReserve switched off.
- Only conduct tests with a test voltage that is below the maximum permissible operating voltage of the MyReserve: Test voltage ≤ 1.000 V (max. 25A)

If testing must be conducted on the system with test voltages/currents that exceed the maximum permissible operating voltages/currents, the MyReserve must be disconnected/removed from the DC string of the PV system. In order to avoid potential damage to the MyReserve, the system must only be tested when the MyReserve is disconnected.

## ⚠ IMPORTANT

**Personal injury and/or property damage as a result of maintenance by unqualified persons**
Only qualified installers who are trained and certified by SOLARWATT may perform service and maintenance work on the MyReserve.
The SOLARWATT qualified installer must check and document all important variables such as the maximum PV string open circuit voltage and maximum PV string current prior to the final handover to the system owner.
In addition, the serial numbers of the MyReserve and battery modules must be documented.

## ⚠ IMPORTANT

**Personal injury from electric shock during improper testing of the overall system.**
Only SOLARWATT qualified installers may perform service and maintenance work on the MyReserve.
Be aware that there may still be voltage at the PV terminals while the PV system or inverter is being tested, even if the DC cut-off switch has been turned off.
Battery modules must only be replaced by specialists who have received training in battery handling. This work may only be carried out with the requisite level of caution.
Module batteries may only be replaced with identical battery modules from SOLARWATT.
The general requirements for removing and inserting batteries apply.

## ⚠ IMPORTANT

Switch off and isolate the MyReserve for maintenance and inspection of the PV system.

## ⚠ IMPORTANT

Battery modules may not be thrown into a fire. This may cause them to explode.
Battery modules must not be opened. DO NOT USE a battery if it is damaged or deformed. Exposed electrolyte is hazardous for the skin and eyes.
A defective battery module can also entail the risk of electric shock and high short-circuit currents.
The following safety precautions should be taken when working with battery modules:

- Remove watches, rings and other metal objects.
- Use tools with insulated handles.
- Do not place tools or metal parts on the battery modules.
- Switch off the inverter and the DC cut-off switch before connecting or disconnecting the battery connections.
- Check whether the battery modules have been inadvertently grounded. If this is the case, disconnect the source of the ground. Contact with part of a grounded battery module can cause electric shock. The likelihood of electric shock can be reduced if the ground is disconnected during setup and maintenance (this applies to equipment and disconnected battery supply lines without grounded supply circuits).

# Conduct in the event of a malfunction

## MyReserve technical problems

Check the LED indicator. If an error code (see chapter "MyReserve Command LED indicator") is shown, carry out the suggested solutions listed under Status. If the problem persists, contact Technical Support at +49 88 95 333 for Germany or your local SOLARWATT office.

## MyReserve critical states

- Electrolyte leaking out
- Strong, pungent smell
- Development of smoke
- Storage battery burning

Immediately leave the installation location and then call the emergency services

**UK: 999/112**

**AUS: 000**

## Firefighting measures

In the event that the battery is exposed to excessive heat such as an external fire, observe the following:
The battery's primary products of combustion are carbon dioxide ($CO_2$) and water vapor ($H_2O$). Significantly smaller quantities of carbon dioxide (CO), hydrofluoric acid (HF) and other gaseous intermediate products are released as well. Dusts of nickel oxide, cobalt oxide, manganese oxide (with NMC cells) must also be taken into account.
Unsuitable extinguishing agent: Water jets, Type D extinguishers

Suitable extinguishing agents: Sand, dry extinguishing powder, carbon dioxide, Type PM12i metal fire extinguishers.
If the battery is exposed to fire but is not yet burning, water is a suitable extinguishing and cooling agent. However be aware of using water on anything still conducting electricity otherwise there is a risk of electrocution.

## Instructions for firefighting measures

1. As long as the battery has not yet overheated, the system can be cooled down using carbon dioxide or a jet of water, provided that the following warnings are kept in mind.
2. When extinguishing with water or other electrically conductive extinguishing agents avoid direct contact with exposed metal parts and cable cores, there is a risk of electric shock from DC voltage of up to 1.000 V and AC voltage of up to 230 V.
3. Do not inhale fumes, or use a self-contained breathing apparatus. If possible, wear a full protection suit.
4. The battery's heating value is approximately 140 MJ.

# MyReserve Command technical problems

In the event of an error, contact SOLARWATT Technical Support +49 351 / 8895-333.
If SOLARWATT Service determines that the MyReserve requires a software update, three options are available for the update:

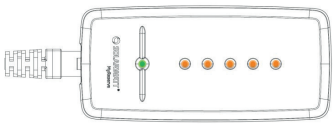
### Remote update of MyReseve via internet connection

Software updates to MyReseve can be done remotely by Customer Support.
However, security-relevant updates are only available via Update Stick or App on site.

### Update via update stick

The update-Stick is available with plastic housing or with shrink tubing . It will be sent to you free of charge. The return shipment should be made within 4 weeks via the enclosed return envelope.

1. Switch off MyReserve Command on the AC side (AC switch at the bottom plate in OFF-position)
2. Switch off MyReserve Command DC switch
3. Switch off the inverter, follow the switch-off sequence according to the manufacturer's instructions
4. Remove the AC sensor CAN cable from MyReserve Command
5. Insert update stick into the RJ45 socket (CAN) on MyReserve Command
6. Check data cable on update stick for correct fitting
7. Switch on MyReserve Command on the AC side, leave DC side switched off!
8. Wait until update is completely installed (first LED permanently green + all 5 orange LEDs light up)



9. Switch off MyReserve Command on the AC side (AC switch at the bottom plate in OFF-position).
10. Remove update stick. **Do not yet connect the AC sensor CAN cable.**
11. Switch on MyReserve Command on the AC side (insert the power supply plug)
12. Wait 30 seconds. The PV meter board is being updated. After completion MyReserve Command LEDs light up in the current state of charge (Status LED green + charge status LED blue).
13. Switch off MyReserve Command on the AC side (AC switch at the bottom plate in OFF-position).
    **Now connect the AC sensor CAN cable.**
14. Switch on the inverter, follow the switch-on sequence according to the manufacturer's instructions
15. Switch on MyReserve Command DC switch (leave AC supply switched off)
16. Wait until the inverter has found operating point
17. Switch on MyReserve Command on the AC side

### Update via MyReserve App

1. Switch off MyReserve Command according to installation instructions.
2. Switch on the AC power supply to the MyReserve.
3. Load the MTX file for the MyReserve App onto the smartphone.
4. Establish a steady Bluetooth connection between the MyReserve App and the MyReserve Command (MyReserve App Settings).
5. Click on "SOFTWARE UPDATE" in the Pro section of the App. An orange colored bar with the new software version will appear under the heading "Update to Version". Click on the bar to start the process and the update will start and could take up to 20 minutes.
   Attention: Do not remove the smartphone from the Bluetooth range of the storage system during the transfer.
6. An app notification will appear after a successful firmware update.
7. Restart MyReserve Command according to installation instructions.
8. Internal calibrations, if required by the update, will be visible by sequential lighting on the LEDs. For a reboot of the system, which may be necessary for other reasons, wait at least 3 minutes.

## AC-Sensor technical problems

| Error | Possible cause | Fault indication | Troubleshooting direct measurement | Troubleshooting CT clamp measurement |
|---|---|---|---|---|
| No Measurement data | No Power supply | no LED lights up | Make sure voltage is supplied to terminal L1 | Make sure that voltage is supplied to terminal L1 |
| | CAN bus not connected/not connected correctly | CAN-LED does not light up green | Check connection and wiring of CAN bus | Check connection and wiring of CAN bus |
| | Error | Status LED flashes 5x/sec | Restart the ACS:<br>• switch off the phase that is connected to L1<br>• switch on again after 3s | Restart the ACS:<br>• switch off the phase that is connected to L1<br>• switch on again after 3s |
| Unusual measurements | Incorrect installation | Feed-In LED indicates wrong status | Check the assignment of L1, L2 and L3<br><br>Check Grid-side and House-side | Check the assignment of L1, L2 and L3 on the CT clamps |
| | Two or more phase conductors interposed | Feed-In LED indicates wrong status | Check the assignment of L1, L2 and L3 | Check the assignment of L1, L2 and L3 on the CT clamps<br><br>Check the direction of the current flow of the CT clamps |
| | The secondary winding of one or more current transformer clamps is connected in a wrong direction | Feed-In LED indicates wrong status | | Check the direction of the current flow of the CT clamps and the connection of the secondary winding |

If you are experiencing technical problems with the AC Sensor, please use the SOLARWATT service hotline. We will need the following information to assist you further:

- Type and serial number of the AC Sensor (see type plate)
- Type and serial number of the device receiving the measurements from the AC Sensor on the CAN bus.
- Provide as much detail as possible when describing the error

# Packaging, storage, transport

## Packaging

**IMPORTANT**

The components of the MyReserve are delivered in separate packaging units. Please inspect the delivery for damage and completeness.
If damage is evident on the packaging, please make a note of this on the delivery documentation and have the supplier or delivery driver sign it.
Reject heavily damaged packages.

**DANGER**

**BE SAFE Avoid Life-threatening dangereous situations and DO NOT install damaged components**
Do not accept battery storage housings and battery modules in externally damaged packaging and never install them.
In this case, contact your Distributor or local SOLARWATT office immediately.

## Storage

**DANGER**

**Dangerous conditions caused by improper storage / handling of the battery modules and/or overall system**

- Storage of the battery modules must take place under specific conditions.
- Do not store battery modules in environmental temperatures less than -20°C and above 55°C.
- Do not store or expose battery modules to direct sunlight.
- Do not store battery modules with highly flammable or corrosive substances.
- Do not throw battery modules into fire, do not open and / or dismantle them.
- Do not expose battery modules to air humidity above 85 % (non-condensing) and/or do not store them outdoors.

## Transport

**IMPORTANT**

**Damage or defects due to improper handling / transport of the MyReserve or battery module**
Refer to the document "MyReserve Pack Handling and Transport Instructions" for recommended transport and handling directions.

# Environment

### Disassembly and disposal

**⚠ DANGER**

**Environmental damage and life-threatening personal risk can occur due to improper handling / disassembly and disposal!**
Only SOLARWATT qualified installers may carry out the disassembly and disposal of the battery system.

MyReserve may not be disposed of with the household waste. Particular care must be taken when disposing of the MyReserve and it's batteries. For information regarding safe and environmentally friendly disposal of your MyReserve or batteries contact your SOLARWATT certified installer or SOLARWATT AUSTRALIA.

Defective batteries can be harmful to the health and cause life-threatening conditions. If you detect that one or more defective battery modules is leaking electrolyte and/or emitting an unpleasant odour, contact the Fire Brigade immediately using the 000 phone number or your local emergency number. Do not approach the battery modules.

Defective batteries can explode. This can lead to dangerous situations. In the event of a dangerous situation, leave the location of the battery modules immediately and call the Fire Brigade using your local emergency number. Do not approach the battery modules.

For non-critical cases, a qualified SOLARWATT certified installer will inspect and provide a report on the battery module If it is determined to be defective and/or no longer properly performing to SOLARWATT standards then SOLARWATT or by a company contracted by SOLARWATT will arrange collection and the appropriate disposal.

**AUS:** Contact SOLARWATT on 130 765928 (SOLWAT)
The housing and control unit can be disposed as electronic scrap - e.g. at a recycle centre. The AC Sensor must be disposed of in accordance with the locally applicable waste disposal regulations for electronic scrap.

# Appendix

## Conformity

### EC Declaration of Conformity

SOLARWATT GmbH
Maria-Reiche-Straße 2a
01109 Dresden

hereby declares under its sole responsibility that the product MyReserve 25 complies with the require-ments of the standards in the table below as specified in the EU Directives:

- Low-Voltage Directive 2014/35/EU (LVD)
- EMC Directive 2014/30/EU
- RoHS Directive 2011/65/EU (RoHS)
- RED Directive 2014/53/EU

divided according to the following product components:

| | MyReserve 25 | | | |
|---|---|---|---|---|
| | Components of the system | | | |
| Directives | MyReserve Command 25 | MyReserve Pack 24.3 (IP54) | AC-Sensor 63 | AC-Sensor Flex |
| Low-Voltage Directive | | | | |
| EN 62109-1:2010 | ✔ | ✔ | - | - |
| EN 61010-1:2010 | - | - | ✔ | ✔ |
| EN 62368-1:2018 | - | ✔ | - | - |
| EMC Directive | | | | |
| EN 61000-6-1:2007 | ✔ | ✔ | ✔ | ✔ |
| EN 61000-6-3:2007 | ✔ | ✔ | ✔ | ✔ |
| RoHS Directive | | | | |
| EN 50581:2013 | ✔ | -[1] | ✔ | ✔ |
| RED | | | | |
| EN 300 328 V1 .8.1 | ✔ | - | - | - |
| EN 301 489-1 V1.9.2 | ✔ | - | - | - |
| EN 301 489-17 V2.2.1 | ✔ | - | - | - |

✔ Standard applicable
- Standard not applicable

[1] Li-ion batteries are subject to the Batteries Directive (2013/56/EU)

and therefore conforms to the statutory regulations of the EU Directives.

Dresden, 06/11/2020
Location and date of issue

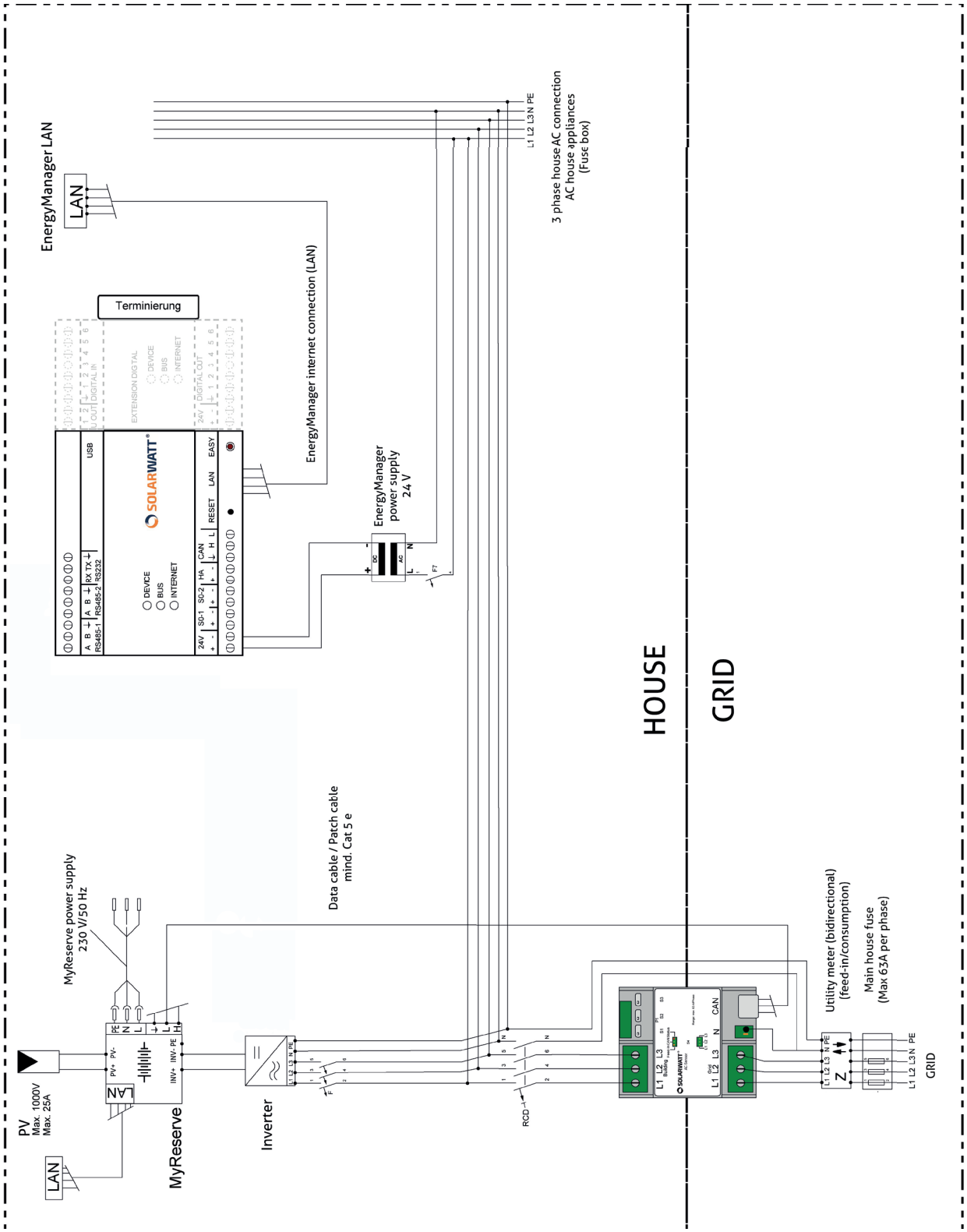
Detlef Neuhaus
Managing Director (CEO)

Sven Böhm
Managing Director (CFO)

## Circuit diagram MyReserve and EnergyManager Pro

**IMPORTANT**

Connect the bus termination to the EnergyManager!



## Type plates

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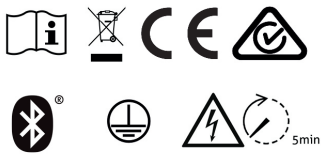
SOLARWATT GmbH
Maria-Reiche-Straße 2a
D-01109 Dresden
www.solarwatt.com

| Modell | MyReserve Command 25 | | |
|---|---|---|---|
| Typ | Batterieumrichter | Umgebungstemperatur | -10°C bis 44°C |
| max Eingangs- / Ausgangsspannung DC | 1000 V | rel. Luftfeuchte | ≤ 100% |
| max Eingangs- / Ausgangsstrom DC | 25 A @ 670 V (Umpp) | Gewicht | ~ 12,9 Kg |
| max $P_{kon}$ Laden / Entladen | 4,5 kW | Schutzart | IP 54 |
| **AC-Versorgung** | | Schutzklasse | I |
| Spannung | 230 V | | |
| Frequenz | 50 Hz | | |
| max Leistung | 7 W | | |

**WARNUNG!**

Lesen Sie die Bedienungsanleitung vor der Installation, der Inbetriebnahme oder der Wartung dieses Systems. Verbinden oder trennen Sie KEINE Steckkontakte während das System unter Laststrom ist. Missachtung führt zu gefährlichen Situationen!

**GEFAHR!**




ID: 0004A30B000B254F
BT: 273D

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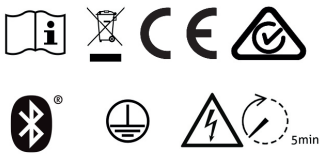
| model | MyReserve Command 25 | | |
|---|---|---|---|
| type | battery converter | ambient temperature | -10°C to 44°C |
| max input / output voltage DC | 1000 V | relative humidity | ≤ 100% |
| max input / output current DC | 25 A @ 670V (Umpp) | weight | ~ 12.9 kg |
| max $P_{con}$ charging / discharging | 4.5 kW | IP rating | IP 54 |
| **AC supply** | | protection class | I |
| voltage | 230 V | | |
| frequency | 50 Hz | | |
| max power | 7 W | | |

**WARNING!**

Refer to Installation and operation manual before installing, operating or servicing this unit. DO NOT connect or disconnect plug contacts while system is under load current. Failure to comply can result in a danger situation!

**DANGER!**




ID: 0004A30B000B254F
BT: 273D

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Maria-Reiche-Straße 2a
D-01109 Dresden
www.solarwatt.com

| Modell | MyReserve Pack 24.3 (IP 54) | | |
|---|---|---|---|
| Typ | Li-Ion Batterie | Umgebungstemperatur | -10°C bis 44°C |
| Nennspannung | 43,8 V | rel. Luftfeuchtigkeit | ≤ 100% |
| Energiegehalt | 2,4 kWh | Gewicht | ~ 25 kg |
| Nominale Kapazität | 53 Ah | INP177/276/185/(12S)E/0+30/95 | |

**WARNUNG!**

Lesen Sie die Bedienungsanleitung vor der Installation, der Inbetriebnahme oder der Wartung dieses Systems. Verbinden oder trennen Sie keine Steckkontakte während das System unter Laststrom ist. Missachtung führt zu gefährlichen Situationen!

**Gefahr!**


xxxxxxxxxxxxxx

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| model | MyReserve Pack 24.3 (IP 54) | | |
|---|---|---|---|
| type | Li-Ion Battery | ambient temperature | -10°C to 44°C |
| rated voltage | 43.8 V | rel. humidity | ≤ 100% |
| energy | 2.4 kWh | weight | ~ 25 kg |
| capacity | 53 Ah | INP177/276/185/(12S)E/0+30/95 | |

**WARNING!**

Refer to Installation and operation manual before installing, operating or servicing this unit. DO NOT connect or disconnect plug contacts while system is under load current. Failure to comply can result in a danger situation!

**DANGER!**


xxxxxxxxxxxxxx

# FAQ

**Is it normal that the MyReserve Command becomes warm during operation?**
Yes, it is the expected operating behavior. MyReserve Command can heat up to as high as 60°C during operation.

**What do I do once the battery modules reach the end of their service life?**
Contact your local SOLARWATT certified installer or SOLARWATT office. SOLARWATT will then take care of disposing of the batteries. Important: The battery modules should not be disposed of as household waste.

**Is use of the device permitted with inverters having multiple MPPT inputs?**
Yes, the MyReserve can be used on PV inverters with multiple MPPT inputs. Keep in mind that the storage system should only be connected to one of the MPPT inputs.

**Why doesn't the MyReserve start charging first thing in the day?**
The MyReserve battery storage system uses a self-learning, intelligent algorithm to analyze household energy production and consumption, and uses that information to learn when and how much surplus electricity will be available to charge the battery. The charging process is distributed over the course of the day and completed at sunset, which is particularly gentle on batteries and thus maximizes their service lifespans. .

**Can I use my photovoltaic plant and MyReserve as a backup system in case of power failures?**
No. The MyReserve system is designed to help users supply their own energy in an economically efficient way, and does not have an emergency power function.

**If the MyReserve fails, will the photovoltaic system stop producing electricity?**
No. In most cases, the photovoltaic system will continue operating as usual. The PV system and PV inverter will only be disconnected from one another if and when you switch off the DC isolator integrated into the MyReserve.

**What does MyReserve initialization involve?**
After the MyReserve has undergone initial commissioning/recommissioning and the battery relay has been opened, the system will be initialized to check whether minimum switch-on conditions are in place. Initialization is completed when the following conditions are fulfilled simultaneously without interruption for 30 seconds: Voltage on connected PV string >120 V, current on connected PV string >0.3 A, output measured by AC Sensor (feed) >100 W.
The MyReserve will only be permitted to begin CHARGING or DISCHARGING following successful initialization. This 'Commissioning' validation occurs each day.

**What algorithm is used to determine how the MyReserve is charged?**
Li-ion batteries age more quickly when fully charged. To optimize battery life, the MyReserve uses a self-learning charge algorithm under which the batteries only finish charging shortly before sunset. In some circumstances, this may mean that the MyReserve does not use the first energy surpluses in the morning to charge the battery.

**Is forced charging of the battery modules necessary during winter?**
If no electricity can be generated over a longer period of time, for example because the PV system is covered in snow, the MyReserve switches into energy-saving mode in order to prevent deep discharge of the battery modules. This mode, known as Sleep Mode, helps ensure optimal protection of the battery modules. The battery modules will remain capable of switching back into normal operating mode easily and automatically for a period of up to five months. If this five-month period is exceeded, the battery modules can be re-activated by a service technician.
If the MyReserve is completely discharged, i.e. a cell in the MyReserve Pack reaches the minimum permissible voltage, it will be charged until all cells in the MyReserve Pack have reached a minimum voltage.
The charging takes place with at least 50 % of the PV power. If the AC sensor measures a feed into the grid, i.e. the household uses less than the remaining 50 % of the

PV power, MyReserve is additionally charged with this surplus until a predefined state of charge is reached.
The unconditional charging serves as deep discharge protection for the battery cells and contributes to an extension of the product life.

**Note:** The MyReserve opens the battery relay as soon as the usable energy has been discharged completely. When the battery relay is open, the system's internal energy consumption will be held to a minimum.

# Further applicable documents

- MyReserve Command 25 data sheet
- MyReserve Pack 24.3 or MyReserve Pack 24.3 (IP54) data sheet
- AC Sensor Flex data sheet
- AC Sensor Flex installation instructions
- MyReserve Pack Handling and Transport Instructions
- EnergyManager Installation Instructions
- Weidmüller PV plug Installation Instructions

**MYRESERVE**

**MAXIMUM EFFICIENCY.**
**CERTIFIED SECURITY.**
**GUARANTEED PERFORMANCE.**

## Any Questions?

**Your customer advisor or our technical support will be happy to help you.**
SOLARWATT GmbH | Maria-Reiche-Str. 2a | 01109 Dresden | Germany
Tel. + 49 351 8895-0 | Fax + 49 351 8895-100 | info@solarwatt.com
Certified acc. to ISO 9001, 14001, 45001 and 50001

**www.solarwatt.com**