# MANUAL

## Power Switch

EN

suitable for

RCT Power Storage DC

## Copyright



We reserve the right to make technical changes that improve the equipment or increase the safety standard, even without a separate announcement.

## Responsible for content: RCT Power GmbH



## About us:

RCT Power GmbH

Line Eid Str. 1

78467 Konstanz, Germany

Phone: +49 (0)7531 996 77-0

Mail: info[at]rct-power.com

Internet: www.rct-power.com

Document number: 02/2021

Table of contents

# 1 Notes to this manual

## 1.1 Scope of validity

This manual refers to Power Switch, according to type designation:

### RCT Power Switch 63/25, Art.-Nr. 310-0003

- All-pole disconnection
- Suitable for one or more power inverters up to a total of max. 24A/phase
- Standard version DE /AT /CH, especially DE /CH

### RCT Power Switch 63/25-3, Art.-Nr. 310-0004

- 3-pole disconnection
- Suitable for one or more power inverters up to a total of max. 24A/phase
- Standard version AT (several network operators)

Please pay attention to the relevant system documentation, such as:

- Technical data RCT Power Storage
- Manual RCT Power Storage
- Setup RCT Power Storage
- Manual RCT Power Sensor

The contents of the manual will be periodically updated or revised due to product development.
The latest manual version can be accessed via www.rct-power.com.

RCT Power GmbH reserves the right to make changes to specifications or documents without prior notice.
RCT Power GmbH shall not be responsible for any damages resulting from use of this document.

This document does not replace any applicable laws, regulations, standards or codes.

Warranty conditions come enclosed with the device. No warranties can be derived from this document.

## 1.2 Target group

This manual is for trained electricians. The activities described in this manual may only be carried out by qualified electricians.

## 1.3 Used symbols

DANGER

„Danger“ indicates a safety note, whose non-consideration leads directly to death or to serious personal injury!

WARNING

„Warning“ indicates a safety note, whose non-consideration may lead to death or to serious personal injury!

ATTENTION

„Attention“ indicates a safety note, whose non-consideration may lead to a slight or moderate injury!

IMPORTANT

„Important“ indicates important informations!

# 2 Use and Safety

## 2.1 Intended use

### 2.1.1 System releases

The Power Switch may only be used in the configuration with an RCT Power Storage DC. The components used and the electrical wiring are approved by the manufacturer RCT Power. Please note that for the backup power function a certain software version of the RCT Power Storage DC is necessary. In case of doubt, please contact to the manufacturer.

### 2.1.2 Allowed grid configurations

DANGER

**All-pole disconnection in customer plant is mandatory!**

Je nach Version ist der RCT Power Switch für die folgenden Netzformen zulässig:

### RCT Power Switch 63/25, Art.-Nr. 310-0003:

| | | |
|---|---|---|
| TN(C)-S | ✓ | Network operator: 4-wire (common PE and N)<br>Customer plant: 5-wire (separated PE and N) |
| TN-S | ✓ | Network operator: 5-wire (separated PE and N)<br>Customer plant: 5-wire (separated PE and N) |
| TT | ✓ | Network operator: 4-wire (common PE and N)<br>Customer plant: 4-wire (only N, PE has no connection to grid; PE only local) |

### RCT Power Switch 63/25-3, Art.-Nr. 310-0004

| | | |
|---|---|---|
| TN(C)-S | ✓ | Network operator: 4-wire (common PE and N)<br>Customer plant: 5-wire (separated PE and N) |
| TN-S | ✓ | Network operator: 5-wire (separated PE and N)<br>Customer plant: 5-wire (separated PE and N) |

ATTENTION !

A TN-C system on the consumer side is not allowed in any of the versions !

### 2.1.3 Country approvals

The final decision on the conformity of the respective version of the Power Switch with the specifications of the network operator is of course the responsibility of the respective network operator.

German low-voltage grid operators generally require all-pole disconnection (VDE Application Rule "Stationäre elektrische Energiespeichersysteme vorgesehen zum Anschluss an das Niederspannungsnetz" - VDE-AR-E 2510-2; 6.410.2.2 Inselbetrieb mit TN-System)

In Austria it is essential to check the respective version with the Austrian distribution network operators before installation. In some supply areas, for example, only a 3-pole separation in the TN-(C)-S network is permitted! In some cases, FRT-capability is also required. In this case, it is absolutely necessary to clarify this with the network operator in advance!

Please note that the system installer/installer is responsible for correct use. In case of doubt, it is always advisable to consult the network operator (especially during the initial installation).

### 2.1.4 Functionality of the Power Switch

- Measurement and transmission of the parameters required for energy management by means of integrated RCT Power Sensor
- Disconnection from grid in case of power failure/ grid failure
- Reconnection in case of power failure is eliminated/ grid returned
- Providing the safety-relevant ground connection in backup-power operation
- Separation of the consumer circuits into „normal" consumer loads (without emergency-power) and in backuped loads

In backup power mode the total load of the backuped circuit must not exceed the rated power of the inverter:

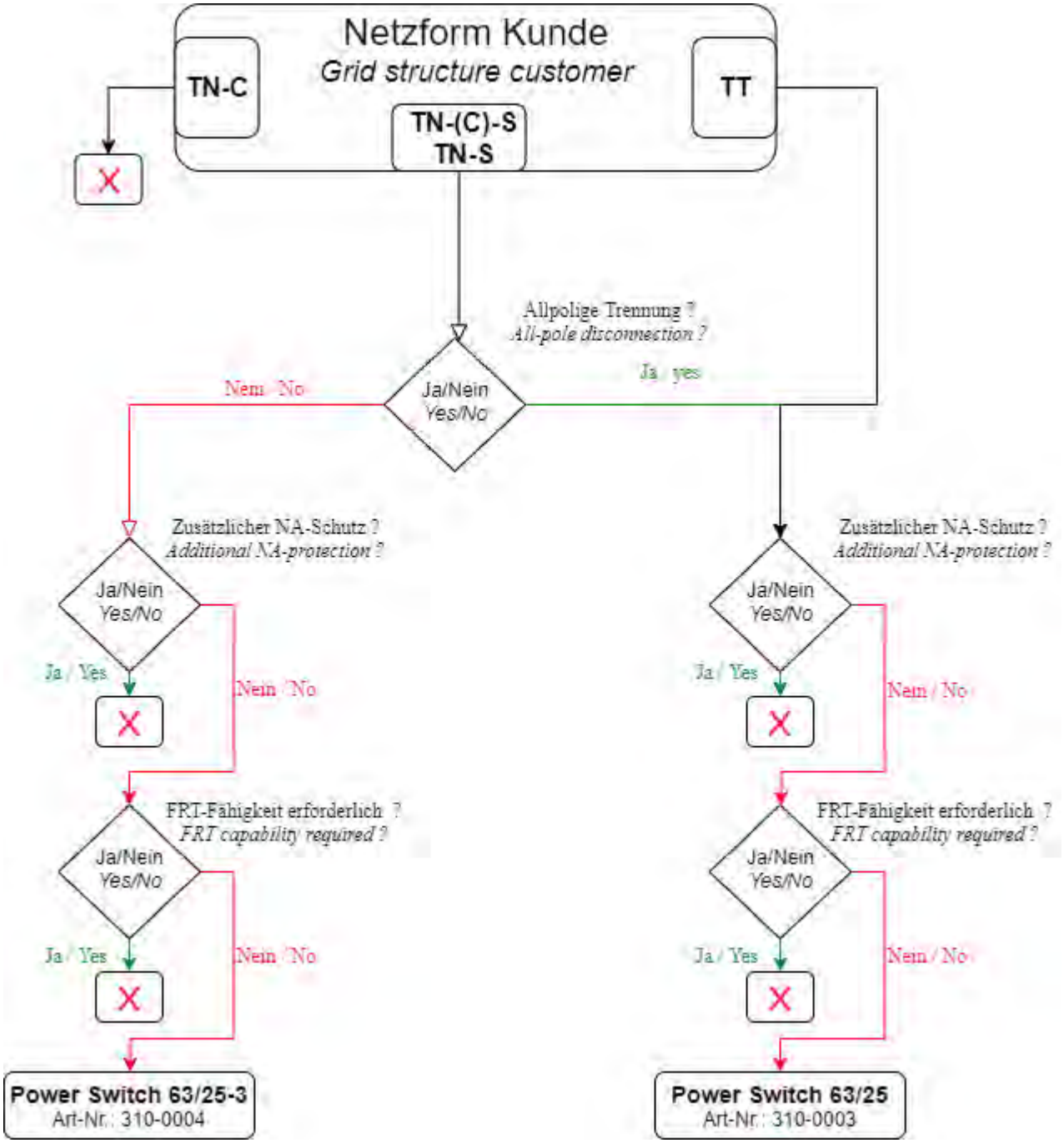
- Power Storage DC 4.0 — **3 x 1,33kVA /4kVA!**
- Power Storage DC 5.0 — **3 x 1,66kVA / 5kVA!**
- Power Storage DC 6.0 — **3 x 2,00kVA / 6kVA!**
- Power Storage DC 8.0 — **3 x 2,66kVA**
- Power Storage DC 10.0 — **3 x 3,30kVA**

### 2.1.5 Selection aid for determining the appropriate version

As explained in 2.1.3, the requirements for the design of the RCT Power Switch vary greatly from country to country and region to region.

**Please make sure to check the requirements of the respective network operator before installation !**

**All types listed below are designed for a maximum feed-in power of 30kW (applied to X2 and X3) (Ta 25°C)**



### 2.1.6 Operation of emergency power switchover

*Switchover grid operation to emergency power*

**Failure or disruption of public grid**

- The Power Storage detects a power failure and disconnects the internal power relays.
- The relay K5* is activated by the power switch board.
- The mains contactors K1, K2 and K3 fall off.
- The mains contactors thereby isolates the Power Storage and the emergency power loads from public grid with all poles**.
- The Power Storage remains connected with the backup power load.
- The mains contactor K3 connects the neutral conductor of the Power Storage to the protective ground conductor and provides a secure „PEN“ connection for backup power operation**. At the same time, an activation of phase coupling is enabled (NC-contacts).
- If single-phase emergency power operation is choosed via F2, phase coupling is activated.
- The Power Storage receives additional informations from the power switch board and starts internal procedure for backup power operation.
- After checking all avilable parameters and additional safety informations (feedback from K1/K2/K3/F2) active feed-in from Power Storage starts after a defined measuring time. From this time all backup power loads are supplied with electrical energy.

*Switchover backup power to grid operation*

**Return of public grid**

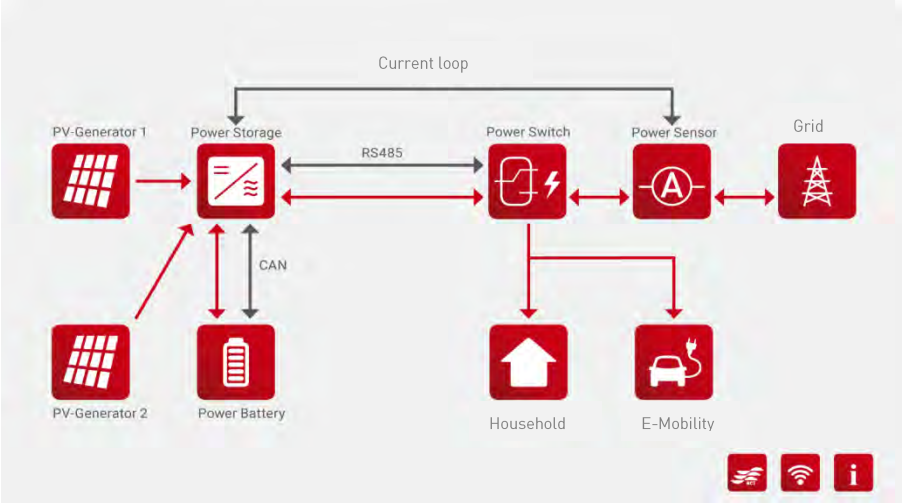
- The Power Switch Board detects mains voltage and transmits this information to the Power Storage.
- After a defined time of measurement, the public is considered to be „stable“ again.

The Power Storage synchronizes with the existing grid and returns to grid operation without interruption // Attention: If the 1-phase island mode is selected, a short interruption occurs during the grid return!

- The Power Storage deactivates relay K5, thus practically simultaneosly:
  - Mains contactor K1 is activated (Connection to public grid is restored on all poles)
  - The contactor K3 is activated (disconnection of "PEN"-connection**)
  - Phase coupling K2 is deactivated.
- Thus the backup power loads and the Power Storage are connected to the public grid again.
- The Power Storage restarts its active feed-in after testing all normatively required grid parameters by means of its internal NA-protection.

* The relay K5 is an additional safety to prevent an activation of the mains and „PEN“ contactors (K1/K2/K3) in case of grid return by means of its normally closed contact. This means that it's not able to switch back to grid mode without an additional „agreement“ of the Power Storage, although grid has already returned.

** only all-pole disconnecting versions



## 2.2 Safety instructions

DANGER

Danger to life due to high voltages! The installation and commissioning of the Power Switch may only be carried out by trained electricians!

The power switch is constructed in a way that:

- Circuit breakers;
- RCD (RCD ≙ Englisch **R**esidual **C**urrent **D**evice);

are servicable. Thus, e.g. required checks of the residual current circuit breaker (test button) can also be performed by laymen.

## 2.3 Explanation of the symbols / characteristic values on the nameplate

| Symbol | Name / Meaning |
|---|---|
|  | **Do not dispose Power Switch and its components in the household waste!** |
|  | *CE-Marking*<br>The Power Switch meets the requirements of applicable EC directives. |
|  | *Safety class II*<br>The Power Switch has reinforced insulation and is thus protected against direct and indirect contact. |
|  <br>without Symbol | *Protection category IP65*<br>The Power Switch is completely protected against dust ingress and water jets. |
|  <br>without Symbol | *Max. Ambient temperature ($t_a$ ) [°C]*<br>The Power Switch can be used up to this max. ambient temperature. |
|  <br>without Symbol | *Rated operating voltage [V]*<br>Do not operate the Power Switch at any other operating voltage than specified! |
|  <br>without Symbol | *Rated operating frequency [Hz]*<br>Do not operate the Power Switch at any other operating frequency than specified! |
|  <br>without Symbol | *Rated operating power [kW]*<br>The Power Switch is designed for this thermal rated power. |
|  <br>without Symbol | *Peak current [A]*<br>The Power Switch can be used up to this peak current. |
|  <br>without Symbol | *IEC/EN – standard specification*<br>The Power Switch complies with IEC / EN 61439-1 and IEC / EN 61439-2 and IEC / EN 61439-3 - "Low-voltage switchgear assemblies" |

# 3 Content of delivery

## 3.1 RCT Power Switch 63/25, Art.-Nr.310-0003

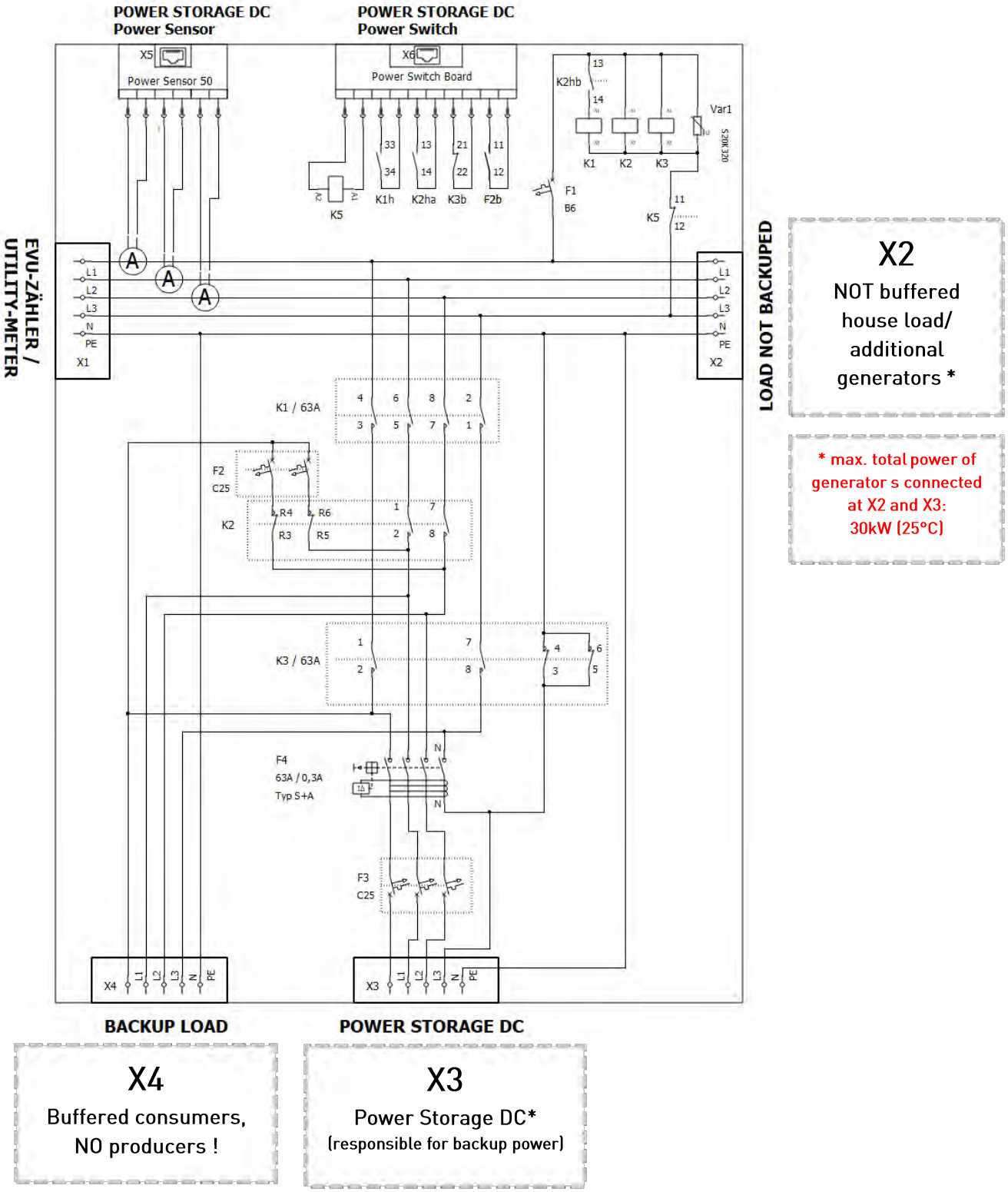

| Position | Number | Designation |
|---|---|---|
| A | 1 | Power Switch 63/25 |
| B | 3 | Cable gland M40 x 1,5 (clamping range Ø 16 – 28mm) |
| C | 4 | Cable gland M32 x 1,5 (clamping range Ø 13 – 21mm) |
| D | 2 | Cable gland M25 x 1,5 (clamping range Ø 9 - 17mm) |
| E | 1 | Cable gland M20 x 1,5 (clamping range Ø 6 – 13mm) |
| F | 3 | Extension from M32 to M40 |
| G | 1 | Extension from M25 to M32 |
| H | 3 | Locknut M32 |
| I | 3 | Locknut M25 |
| J | 2 | Locknut M20 |
| K | 1 | Pressure compensation element |
| L | 1 | Reduction from M20 to M12 (for pressure compensation element) |
| M | 2 | Divisible seal for M25 (for RJ45 cable) |
| N | 4 | Cover caps for mounting screws |
| O | 1 | Warning sticker "dangerous voltage" |
| P | 1 | Sticker - indication of an island-capable storage system |
| Q | 1 | Manual Power Switch (= this manual) |
| R | 1 | Manual Power Sensor |
| S | 1 | RJ45-cable 10m white for Power Sensor |
| T | 1 | RJ45-cable 10m black for Power Switch Board |

## 3.2 RCT Power Switch 63/25-3, Art.-Nr.310-0004

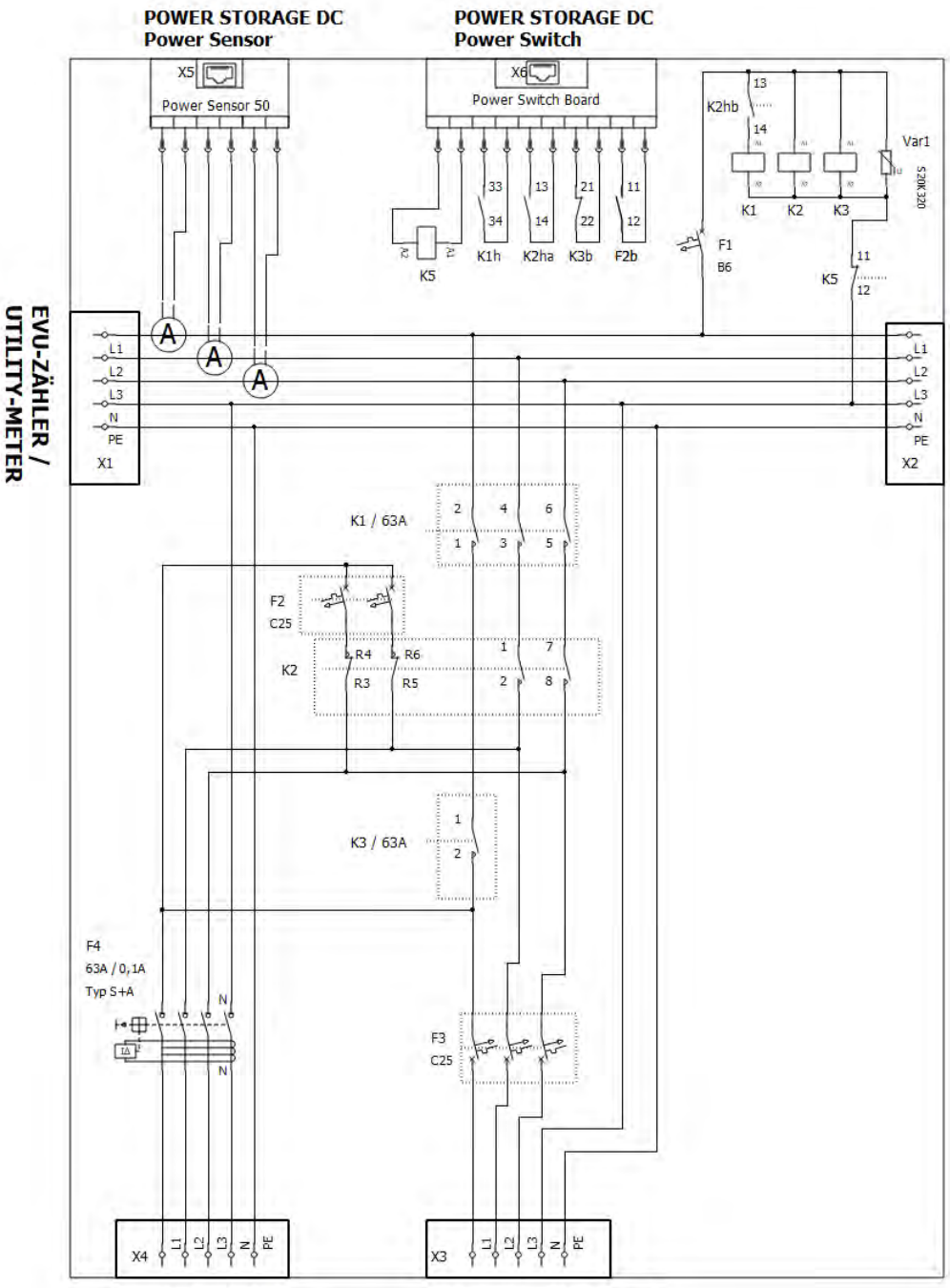

| Position | Number | Designation |
|---|---|---|
| A | 1 | Power Switch 63/25 |
| B | 3 | Cable gland M40 x 1,5 (clamping range Ø 16 – 28mm) |
| C | 4 | Cable gland M32 x 1,5 (clamping range Ø 13 – 21mm) |
| D | 2 | Cable gland M25 x 1,5 (clamping range Ø 9 - 17mm) |
| E | 1 | Cable gland M20 x 1,5 (clamping range Ø 6 – 13mm) |
| F | 3 | Extension from M32 to M40 |
| G | 1 | Extension from M25 to M32 |
| H | 3 | Locknut M32 |
| I | 3 | Locknut M25 |
| J | 2 | Locknut M20 |
| K | 1 | Pressure compensation element |
| L | 1 | Reduction from M20 to M12 (for pressure compensation element) |
| M | 2 | Divisible seal for M25 (for RJ45 cable) |
| N | 4 | Cover caps for mounting screws |
| O | 1 | Warning sticker "dangerous voltage" |
| P | 1 | Sticker - indication of an island-capable storage system |
| Q | 1 | Manual Power Switch (= this manual) |
| R | 1 | Manual Power Sensor |
| S | 1 | RJ45-cable 10m white for Power Sensor |
| T | 1 | RJ45-cable 10m black for Power Switch Board |

# 4 Circuit diagram

## 4.1 RCT Power Switch 63/25, Art.-Nr. 310-0003



## 4.2 RCT Power Switch 63/25-3, Art.-Nr. 310-0004




**X2**
NOT buffered house load/ additional generators *

* max. total power of generator s connected at X2 and X3: 30kW (25°C)

**X4**
Buffered consumers, NO producers !

**X3**
Power Storage DC*
(responsible for backup power)

# 5 Installation

## 5.1 Requirements to the installation site

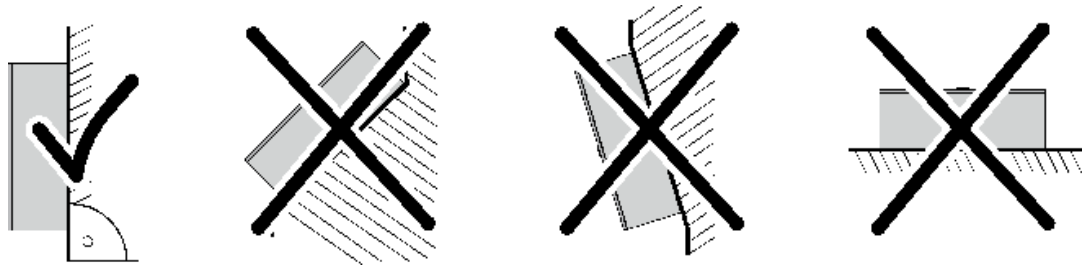
DANGER

**Danger to life due to fire and explosion**

- Do not mount Power Switch on flammable building materials!
- Do not mount Power Switch in areas with easy inflammable materials!
- Do not mount Power switch in potentially explosive areas !

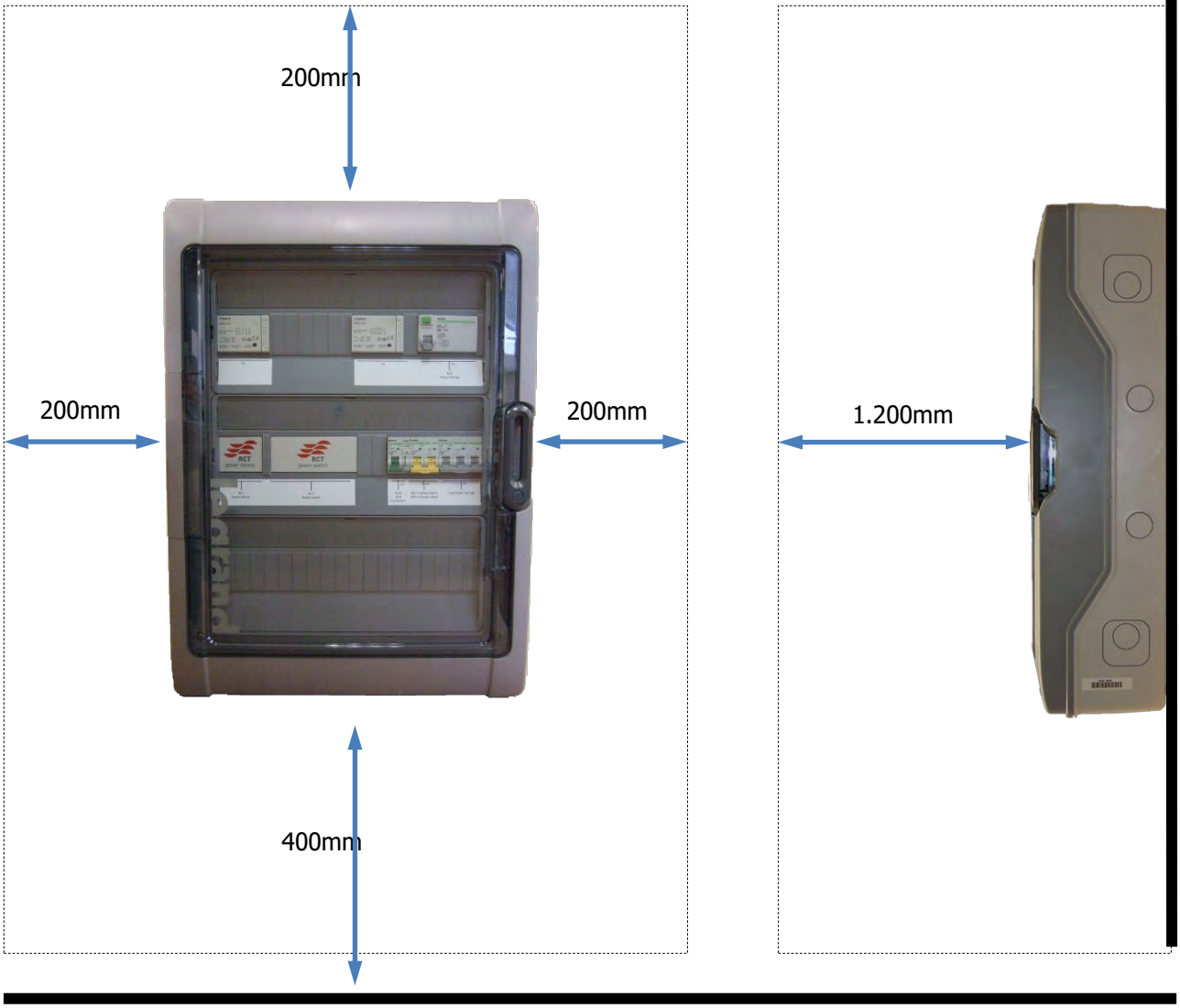
- ☑ Mounting ground is made of solid material
- ☑ Mounting ground is suitable for weight and dimensions
- ☑ Installation site is accessible at all times
- ☑ Climatic conditions are met (see technical data)
- ☑ Installation site is not exposed to direct sunlight and direct weathering
- ☑ Installation site is protected against splash water
- ☑ Technical connection conditions of the grid operator are met

**Mounting position**

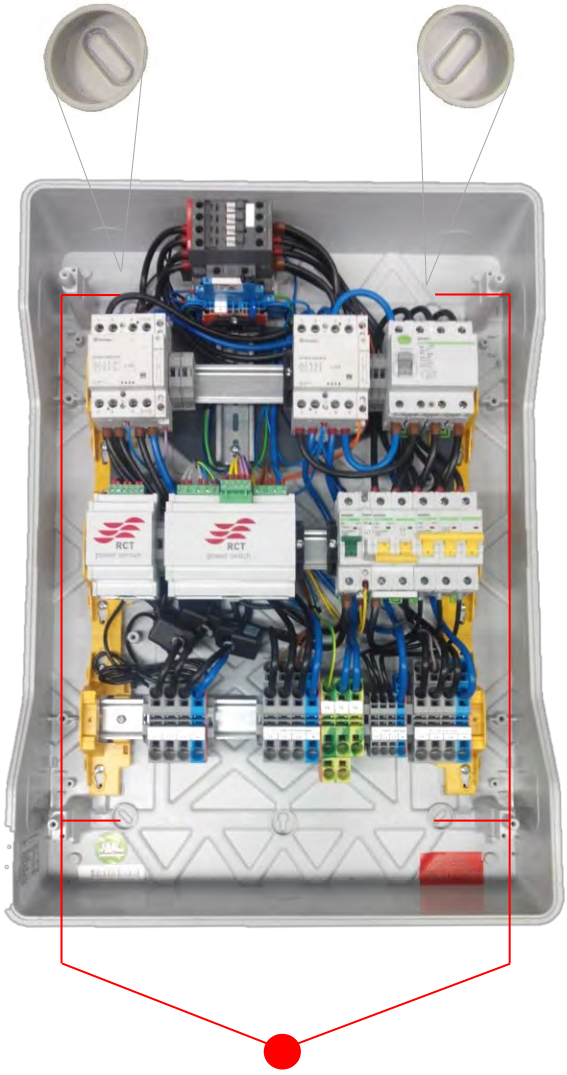


## 5.2 Minimum distances

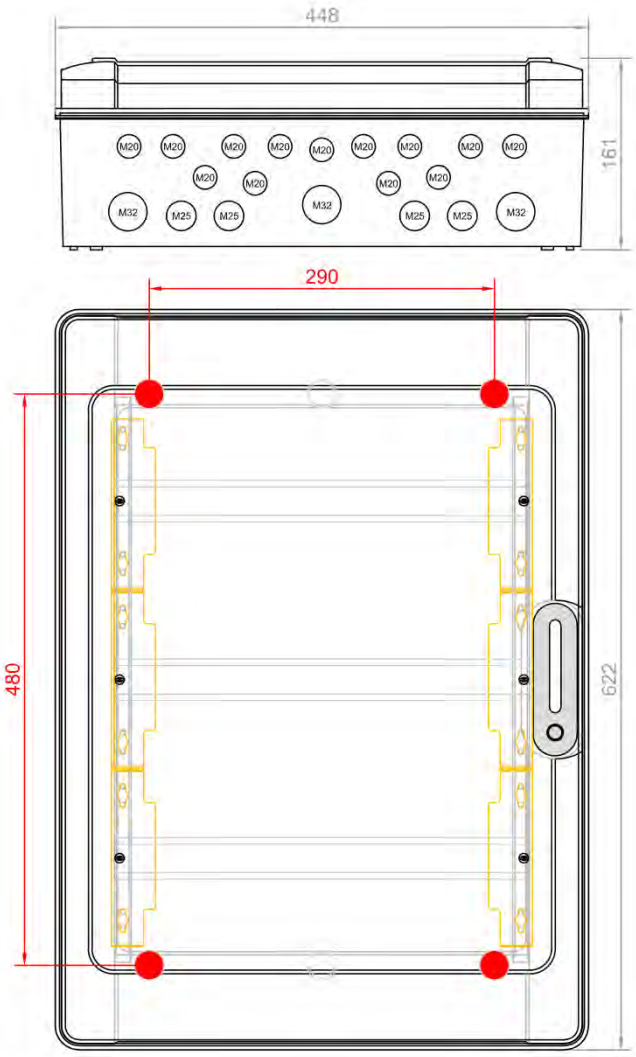
The minimum distances apply to all variants of Power Switch!



## 5.3 Dimensions and mounting



House openings for mounting:
4 x long hole Ø 5.5

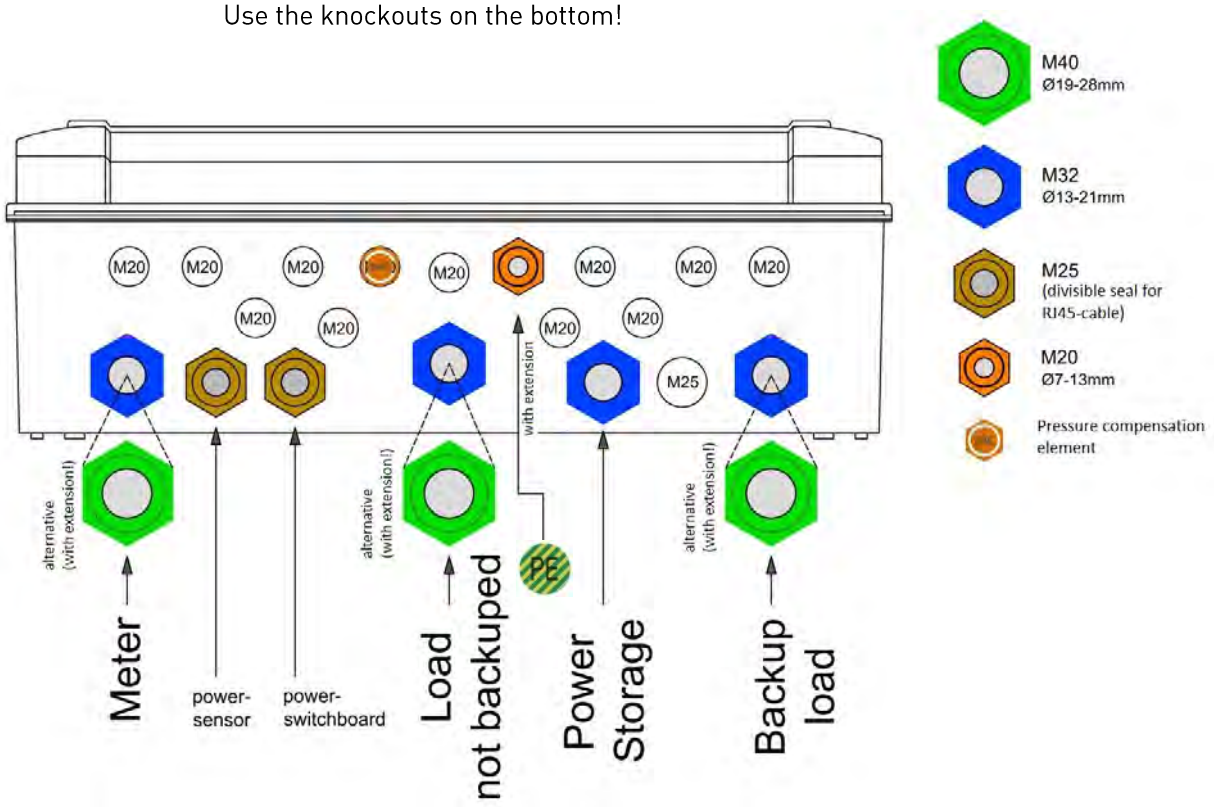



Finally, inpress the caps!

Depending on the substrate, choose a suitable fixing method, e.g. using 4 x expansion anchors S8 and 4 x chipboard / wood screw Ø5.5

## 5.4 Cable entry and cable / cable types

Use the knockouts on the bottom!




| Terminal block | Destination | e.g. cable type | Comment |
|---|---|---|---|
| X1 "Meter" | **to post meter fuse** | NYY-J 5x10mm² | max. fuse value 50A |
| | | NYY-J 5x16mm² | max. fuse value 63A |
| TT-grid! | "0" = ohne | NYY-0 4x10mm² | max. fuse value 50A |
| | | NYY-0 4x16mm² | max. fuse value 63A |
| | **to main earthing rail** (solid or stranded) | NYM 1x10mm² | max. fuse value 50A |
| | | NYM 1x16mm² | max. fuse value 63A |
| X2 "Load not backuped" | **Load – without backup** | NYY-J 5x10mm² | max. fuse value 50A |
| | | NYY-J 5x16mm² | max. fuse value 63A |
| X3 "Power Storage" | **Power Storage"** | NYY-J 5x4mm² | "short and middle distance" |
| | | NYY-J 5x6mm² | "long distance" |
| X4 "Backup Load" | **„Emergency Power" - Load** | NYY-J 5x10mm² | max. fuse value 50A |
| | | NYY-J 5x16mm² | max. fuse value 63A |
| | **"Power Sensor"** | Cat5e* | provided |
| | **"Power Switch Board"** | Cat5e* | provided |

* Requirement of data cables, if not used provided material:

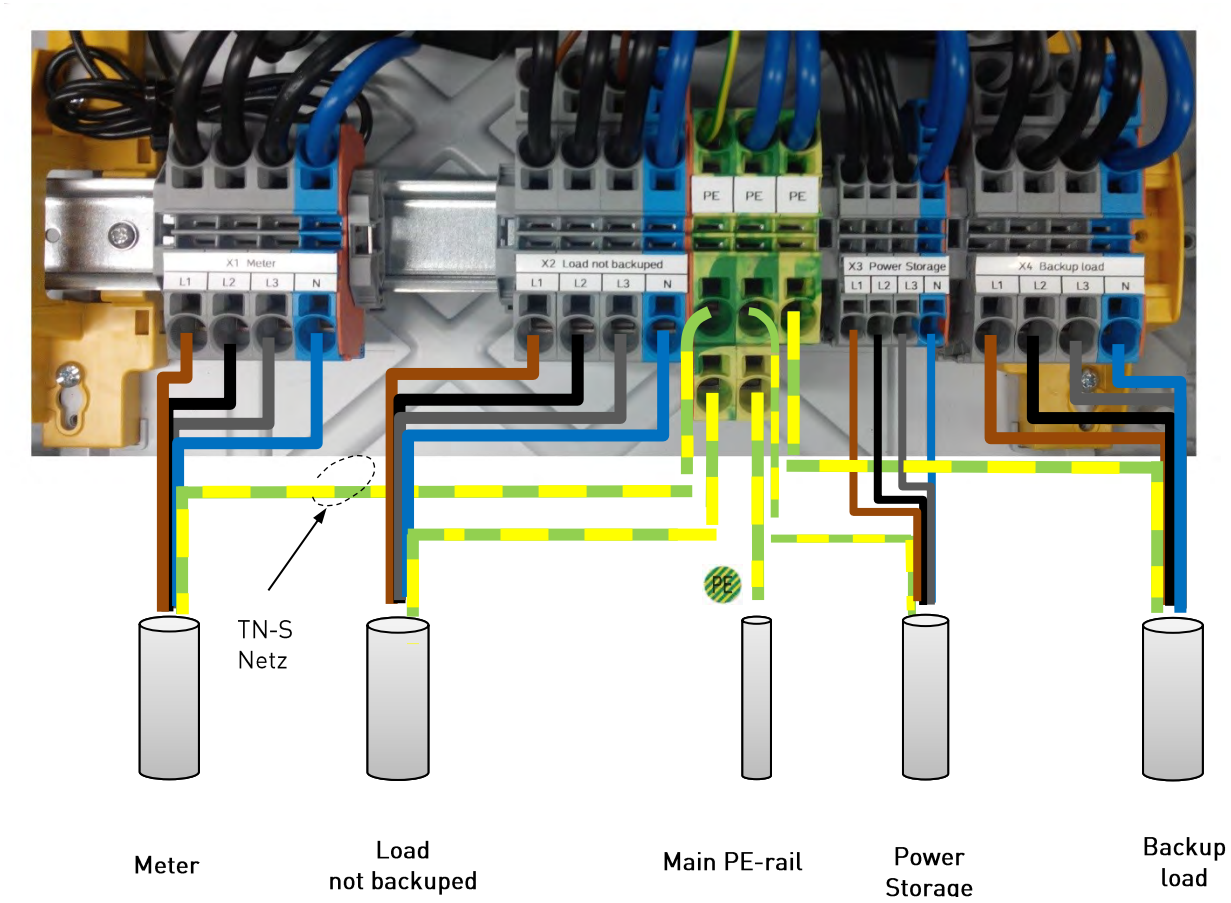
- Cat5e - quality
- Minimum cross section AWG21
- max. length of data cable: 25m!

# 6 Clamping area

## 6.1 Clamping terminals

There are spring clamps installed exclusively *! (WAGO Cage Clamp®)
(*Exception: X5, X6 = RJ45 connector)

| Terminal block | Strands/core type | Max. cross section [mm²] | Stripping length [mm] | End sleeve |
|---|---|---|---|---|
| X1/X2/X4 | solid | 16 | 18-20 | × |
| | stranded | 25 | 18-20 | × |
| | stranded | 16 | 18-20 | ✓ |
| | | | | |
| X3 | solid | 10 | 13-15 | × |
| | stranded | 10 | 13-15 | × |
| | stranded | 6 | 13-15 | ✓ |




If several devices are connected to the "Power Storage" connector, it must be ensured that only one device establishes a stand-alone network.
Furthermore, each device must also be fused separately.
If only one device is connected, using min. 4mm² connection cross-section can be dispensed with an additional fusing.

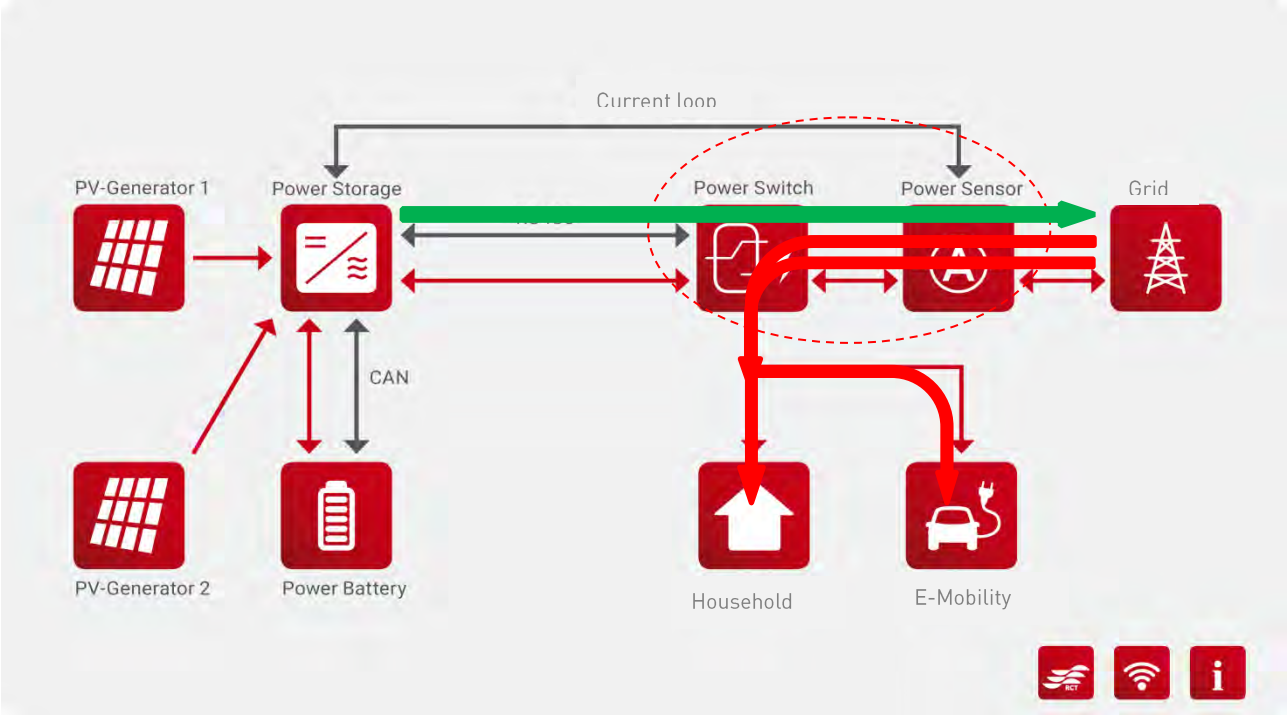
# 7 Throughput Power

The thermal throughput (rated power) and the maximum permissible ambient temperature are decisive for the maximum heating of the components within the Power Switch. In order not to cause unwanted tripping of circuit breakers and residual current circuit breakers, these two parameters must remain within the permissible limits.

Power Switch 63A (= Power supply value max. 63A fuse)

- max. permissible ambient temperature: 40°C
- max. permissible throughput power : 30KW (Ta=25°C)

$$P_{\text{throughput max.}} = \sum \left(+P_{\text{gridload max.}}\right) + \left(-P_{\text{feed-in max.}}\right)$$




In grid operation, a hosehold load consumed by the public grid is "passed" through the power switch. On the other hand, an excess of energy can be fed back into the grid. The mathematical sum of both services is called throughput. The average (average expected) throughput is also referred to as "thermal throughput". A momentary peak power of the household load / PV system can and may be higher!

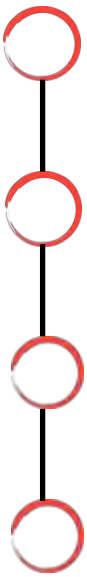
# 8 Commisioning of Power Switch

## 8.1 General

*Requirements*

- ☑ Power Switch is firmly mounted
- ☑ All required cables are correctly installed and connected
- ☑ PE is connected to main equipotential bonding rail
- ☑ All necessary insulation and functional tests have been carried out

## 8.2 Procedure of commissioning Power Battery System with Power Switch



Mechanical installation Power Switch
(see chapter 5 and 6)

Installation Power Sensor
(see Setup Power Sensor)

Installation Power Battery.
( see Manual Power Battery)

Configuration and activation Power Switch.
( see chapter 8.3)

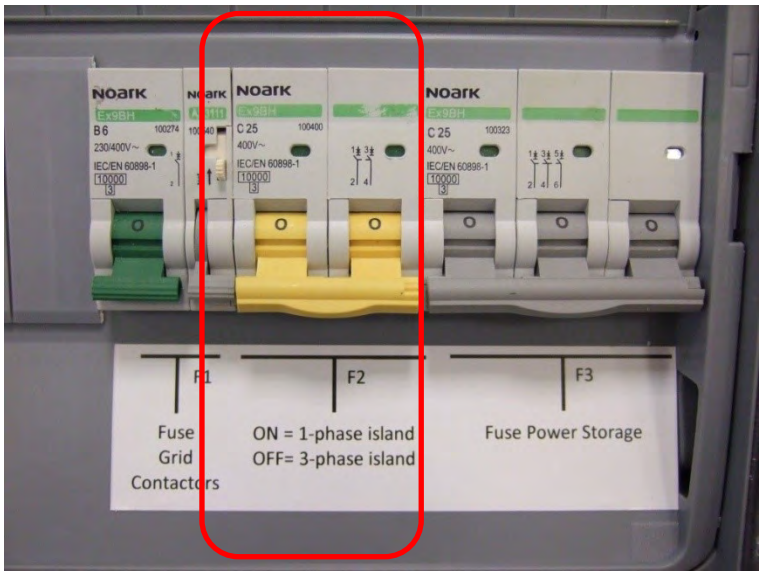
## 8.3 Configuration and activation of Power Switch

### 8.3.1 Configuration island mode

The RCT Power Switch allows to set up island operation both 1-phase and 3-phase. In single-phase island mode, the individual phases L1, L2 and L3 are bridged in case of island operation. This allows to use also big single phase consumers

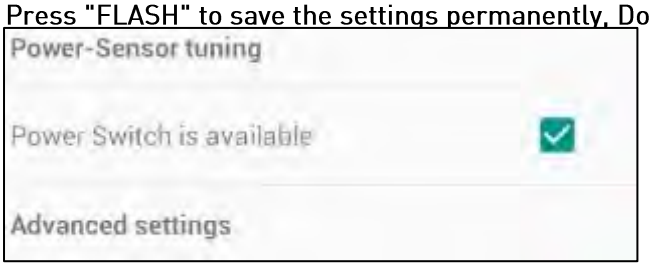
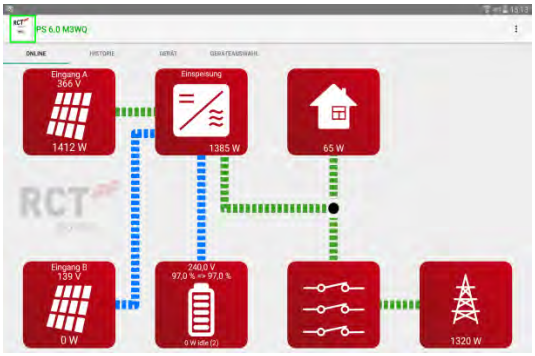
**Please note, that this functionality is not supported by Power Storage DC 8.0 and Power Storage DC 10.0**

To activate the single-phase island mode, the fuse F2 must be switched on.



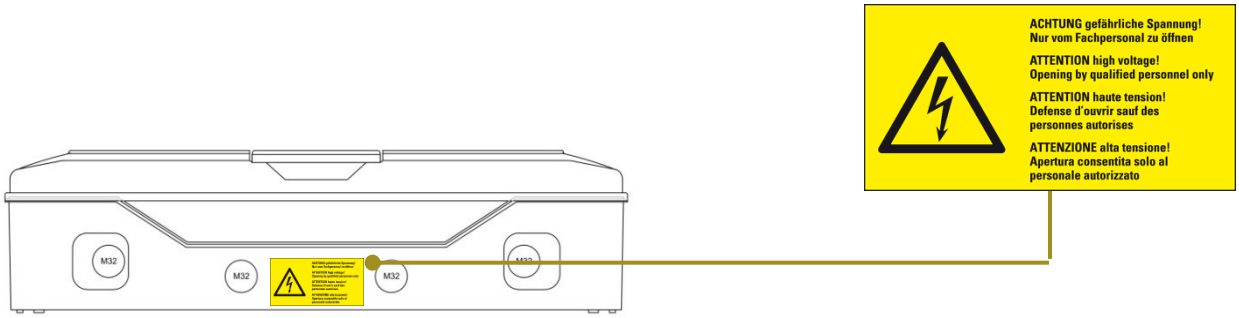

Please note that switching the island mode is only possible during mains operation or when the power switch is turned off!

### 8.3.2 Activation Power Switch via the APP

| Step | Description |
|---|---|
| 1 | Start the “RCT Power APP”. |
| 2 | Continue with device → settings→ device settings (scroll down) → Put the hook on “Power Switch is available” (scroll down)<br>Press "FLASH" to save the settings permanently, Done!<br>  <br>The Power Switch is installed now. |
| 3 | Now if you switch back to the Online view in the APP, you will also see the symbol for the Power Switch<br>  |

### 8.3.3 Final works

☑ After succesful commissioning and closing of the housing, please attach the sticker in the accessory pack on the side of the housing.



# 9 Set Power Switch free of voltage

WARNING

1) Set Input terminal block X3 free of voltage (Feed-in Power Storage)

Set power storage out of service (see the corresponding setup / manual), check the absence of voltage and secure against being switched on again!

2) Set Input terminal block X1 free of voltage (Public grid)

Secure the fuse elements between the public network and the power switch, check the absence of voltage and secure against being switched on again!

# 10 Maintenance and cleaning

You should periodically check the function and safety of the Power Switch. Please observe the national specifications, which differ from country to country. In Germany, e.g. according to "DGUV Vorschrift 3" -§5- elektrische Anlagen und ortsfeste elektrische Betriebsmittel in „Betriebsstätten, Räumen und Anlagen besonderer Art" (DIN VDE 0100-712 für PV-Anlagen) have to be checked ONCE a year by a qualified electrician!

The built-in residual current circuit breakers (RCCB) must be checked by the system operator every 6 months.

Optical test

Depending on the place of installation and the environmental conditions, a more or less strong external pollution takes place. Carefully clean with a moist cleaning cloth! Never open the housing and only clean with the hinged lid closed!

# 11 Storage

Requirements for the storage location:

- ☑ Storage place is dry
- ☑ Ambient temperature is between -25 ° C and + 55 ° C
- ☑ When stored for a maximum of 24 hours, the ambient temperature may be max. + 70 ° C!

# 12 Disposal

Dispose of the Power Switch has to be according to the current disposal regulations for electronic waste!

# 13 Technical data

| Additional documents to be used | Versions |
|---|---|
| ☑ Setup RCT Power Storage DC | ALL |
| ☑ Manual RCT Power Battery | ALL |
| ☑ Manual RCT Power Sensor | ALL |

Please keep up to date with the latest issue statuses.

## 13.1 RCT Power Switch 63/25, Art.-Nr. 310-0003

| | |
|---|---|
| Nominal voltage [VAC] | 230/400 |
| Nominal frequency [Hz] | 50 |
| Allowed battery inverter | RCT Power Storage DC |
| Fuse protection Power Storage connection | MCCB - 3C25 |
| Permitted grid form | TN-C-S/TN-S/TT |
| Grid separation | 4-pole |
| Max. prospective* short circuit current [kA] | 10 |
| Max. grid-side fuse [A] | 63 |
| Max. thermal troughput power (3AC) $P_{NOM}$ [kW] | app. 30 at Ta=25°C<br>app. 20 at Ta=40°C |
| Losses in standby mode [W] | app. 18 |
| Terminals Meter / Load / Backup load | Spring clamp up to 16mm² |
| Terminals Power Storage | Spring clamp up to 6mm² |
| Additional operating losses 25/50/100% von $P_{NENN}$ [W] | app. 2/4/8 |
| Operating temperature range [°C] | -5°C... +40 |
| Relative humidity [%] | 5... 95 |
| Safety class (EN 61140) | II |
| IP-class (EN 60529) | 65 |
| Mounting method | Wall mounting |
| Dimensions WxHxD [mm] | 446 x 622 x 161 |
| Weight app. [Kg] | 15 |
| Product-standard (normative) | IEC / EN61439-1 (EN: VDE 0660-600-1) "Low-voltage switchgear assemblies"<br>IEC / EN61439-2 (EN: VDE 0660-600-2) "Energy switch equipment"<br>IEC / EN61439-3 (EN: VDE 0660-600-3) "Installation distributor for operation by Laity (DBO) " |

* is the max. unaffected continuous short-circuit current of the mains connection

## 13.2 RCT Power Switch 63/25-3, Art.-Nr. 310-0004

| | |
|---|---|
| Nominal voltage [VAC] | 230/400 |
| Nominal frequency [Hz] | 50 |
| Allowed battery inverter | RCT Power Storage DC |
| Fuse protection Power Storage connection | MCCB - 3C25 |
| Permitted grid form | TN-C-S/TN-S |
| Grid separation | 3-pole |
| Max. prospective* short circuit current [kA] | 10 |
| Max. grid-side fuse [A] | 63 |
| Max. thermal troughput power (3AC)<br>$P_{NOM}$ [kW] | app. 30 at Ta=25°C<br>app. 20 at Ta=40°C |
| Losses in standby mode [W] | app. 18 |
| Terminals Meter / Load / Backup load | Spring clamp up to 16mm² |
| Terminals Power Storage | Spring clamp up to 6mm² |
| Additional operating losses 25/50/100% von $P_{NENN}$ [W] | app. 2/4/8 |
| Operating temperature range [°C] | -5°C... +40 |
| Relative humidity [%] | 5... 95 |
| Safety class (EN 61140) | II |
| IP-class (EN 60529) | 65 |
| Mounting method | Wall mounting |
| Dimensions WxHxD [mm] | 446 x 622 x 161 |
| Weight app. [Kg] | 15 |
| Product-standard (normative) | IEC / EN61439-1 (EN: VDE 0660-600-1) "Low-voltage switchgear assemblies"<br>IEC / EN61439-2 (EN: VDE 0660-600-2) "Energy switch equipment"<br>IEC / EN61439-3 (EN: VDE 0660-600-3) "Installation distributor for operation by Laity (DBO) " |

* is the max. unaffected continuous short-circuit current of the mains connection

# 14 Disclaimer

All warranty and damage claims for damages of any kind are excluded if they are due to one or more of the following causes:

- Transport damage
- Improper or not intended use of the product
- Use of the product in an unintended environment
- Use of the product, disregarding the location relevant statutory safety regulations
- Ignoring the warnings and safety instructions in all documents relevant to the product
- Use of the product under faulty safety and protection conditions
- Unauthorized modification or repair of the product
- Malfunctioning of the product due to the influence of connected or neighboring devices outside the legally permissible limits
- Disasters and force majeure

# 15 EC Declaration of Conformity

## EC Declaration of Conformity

enwitec
efficiency

CE

Within the meaning of the EU directives

- **Low Voltage Directive (LVD) 2014/35/EU**
- **Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU**

enwitec electronic GmbH & Co.KG
Scherrwies 2
84329 (postal code) - Rogglfing
- Germany-

hereby declares under its sole responsibility that the hereinafter referred products were developed, constructed and produced in conformity with the above mentioned EU directives.

***RCT Power Switch (matching to RCT Power Storage System)***

| | enwitec order number / RCT part number | |
|---|---|---|
| Standard | 10012416 R(all revision level) / 310-0003 | 10013647 (all revision level) / 310-0004 |
| Low Voltage Directive (LVD) | | |
| DIN EN 61439-1 | ✓ | ✓ |
| DIN EN 61439-2 | ✓ | ✓ |
| Restriction of Hazardous Substances Directive (RoHS) | | |
| DIN EN 50581 | ✓ | |

✓ **Standard is applicable**

\- **Standard is not applicable n.a.**

The last two figures of the year in which the CE-Marking was applied for the first time;
10012416: **18** 10013647: **20**

Rogglfing, 12.01.2018
place and date of issue

Johann Wimmer
Director (CEO)

enwitec electronic GmbH & Co.KG
Scherrwies 2
84329 Rogglfing
Tel.: +49 8725 9664-10
info@enwitec.eu



RCT Power GmbH
Line Eid Str. 1
78467 Konstanz, Deutschland
Tel.: +49 (0)7531 996 77-0
Mail: info[at]rct-power.com
Internet: www.rct-power.com