ENEQUI

# QuiPower Core

## EMS HW 01

## Installation Manual

ENEQUI
Take charge

**Thank you for choosing QuiPower!**

The energy transformation is here and with QuiPower in your property, you have made an active choice to help drive it forward!

Your panels can capture it. Your car can run on it. Now your home can store and control it. With QuiPower Storage, the missing link in clean home energy is finally solved. So that the energy is enough for the future!

To easily follow and control your energy, download the QuiPower App.

We at Enequi are here to answer your questions and thoughts - so do not hesitate to contact us!


Contact details
Email: support@enequi.com
Phone: +46 (0)10 – 122 17 00

# Table of Contents

⚠ **NOTE!**

All information in this document has been compiled and checked with the greatest possible care. Nevertheless, this publication may contain technical or other inaccuracies or typographical errors. The information contained herein is subject to periodic changes; such changes will be incorporated into new editions of the publication.
Enequi may make improvements and/or changes in the services described in this publication at any time. Enequi assumes no liability for the use of outdated documents. Installers and users are therefore advised to check the current version at www.enequi.com or by scanning the provided QR code.

# 1. Safety Instructions

## 1.1. Safety Symbols

Read these instructions carefully before use.

**CAUTION!** Personal injury or property damage may occur.

**WARNING!** Read the information to avoid damage to the equipment.

**ELECTRICAL HAZARD!**
Death or severe personal injury may occur.

**ELECTRIC SHOCK RISK!**
Don't open the device!
Dangerous voltage may still be present inside the unit, even when switched off.

Protective grounding.
Grounding points and grounding screws are part of the protective grounding of the QuiPower Core.

For indoor use only.

Approved in accordance with applicable directives.

The product contains electrical components. Dispose of it as hazardous waste.

## 1.2. General Safety Instructions

⚠ **WARNING!**

- Only qualified personnel may install and connect the QuiPower Core.
- Read this manual before beginning the installation and connection of the QuiPower Core.
- Always wear **PPE** (**P**ersonal **P**rotective **E**quipment) during installation and maintenance. At a minimum, this includes:

  Safety glasses 

  Safety shoes with steel toecaps 

- To avoid personal injury or property damage, it's important that you carefully read, understand and follow the entire contents of this manual, including all safety instructions and warnings.
- Don't install, operate or maintain this product unless you're trained and qualified.
- This manual doesn't cover every installation and situation.

# 2. Technical Data

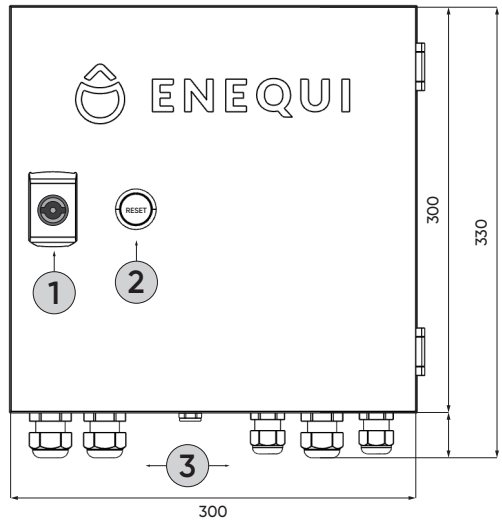
| | AC | DC |
|---|---|---|
| Supply voltage [V] | 100 .... 240 -15% ..+10% | 22 .... 27 PELV |
| Frequency [Hz] | 50 .... 60 ±10% | - |
| Fuse rated current [A] | C10 | T2 |
| Outputs [V] | 250 | 24 |
| *2 changeover contacts*[1] | *1000 VA* | *100 W* |
| *2 open drain* | - | *Max. 500 mA Unprotected*[2] |
| Max. Power consumption [W] | 60 | 40 |
| OVC | III | II |

| | |
|---|---|
| Communication interface | RS485 / CAN / Modbus TCP /Ethernet /USB[3] |
| Heat dissipation | Natural cooling |
| Humidity | <95 RH (non-condensing) |
| Dimensions [W*H*D, mm] | 300 x 330 x 120 |
| Installation mode | Wall-mounted |
| Weight [kg] | 6 |
| Degrees of Protection [IP] | 44[4] / 20[5] |
| Impact Protection Rating [IK] | 5 |
| Operating Temperature Range [°C] | -5 .... +30 |
| Storage/Transport temperature [°C] | -25 .... +50 |
| Altitude [m] | <2000 (no derating) |
| IEC / EN | 61439-1 / 3 |

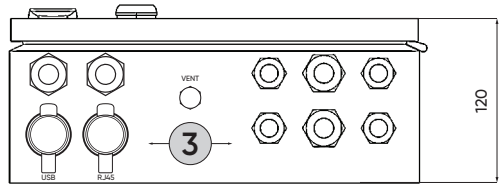
[1] Minimum switching current 10 mA (12 V).
[2] No short circuit protection.
[3] For future use.
[4] IP44 rating is achieved by closed covers, including USB and RJ45 terminal covers.
[5] IP rating reduces to 20 when a plug is connected to the USB or RJ45 port.

# 3. Description

A




B




[ mm ]

**A. Front / Door**

1. Cam lock
2. Led indicator / Push button

**B. Bottom**

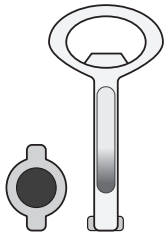
– Ventilation hole

3. Inputs
   - 4 x M16, prepared with cable glands.
   - 4 x M20, prepared with cable glands.
   - *USB (for future use)*
   - RJ45

- **Accessories**

4. Service Key
5. QuiPower Core Manual

4



5

## 3.1. LED Indicator

| Led color | Status |
|---|---|
| LED glows constant blue. | System active. |
| LED flashes blue. | The system is active and operates with batteries. |
| LED flashes purple. | The system is not connected to Enequi Cloud. |
| LED flashes purple and red. | The system has alarms and is not connected to the Enequi cloud, this requires user intervention. |
| LED glows constant red. | The system has alarms that are automatically reset. |
| LED flashes red. | The system has alarms that require user intervention. |

## 3.2. Push Button

When the LED indicator flashes red, the user must identify the system fault and reset the alarm.

– Reset the system alarm by pressing the push button < 2 seconds.

⚠ **NOTE!**

- If a system alarm persists, contact the Enequi Support for further assistance.

# 4. Installation

**⚠ CAUTION!**

First read the safety instructions in this manual. Throughout this manual, it's assumed that the reader is familiar with installations and knows the rules and regulations for electrical equipment and its connection to the mains AC.

The installer must know the general safety rules for working with electrical equipment.

- Install the QuiPower Core according to the electrical drawing.
- Don't put the QuiPower Core into operation until the entire system complies with the application-specific national regulations and safety rules.
- The ambient conditions specified in the product documentation must be observed.
- Only persons who're trained and qualified for the use and operation of the QuiPower Core may work on the device.

## 4.1. Unpacking

- It's recommended that the packaging not be removed until the QuiPower Core is at the installation site.
- Carefully inspect the shipping package before installation and make sure it's no external damage. Don't use damaged or suspected damaged equipment. Report any damage to the dealer immediately. In the event of a return, please pack the QuiPower Core in its original packaging.
- Carefully unpack the product and check if all accessories from the description list are included.
- The manual should be read carefully and kept.

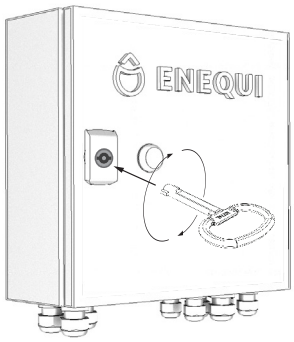
If you are in doubt, please contact the distributor before installing the product.

## 4.2. Mounting

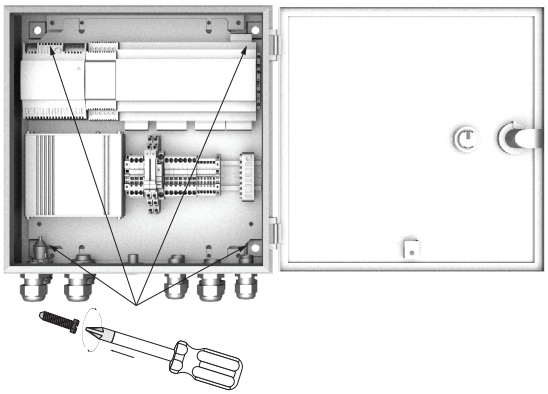
**⚠ CAUTION!**

- QuiPower Core is for indoor use only. 
- Mount QuiPower Core in a location where the ambient temperature is between -5°C and 30°C. If the temperature is outside this range, Enequi cannot guarantee the lifetime of the QuiPower Core and the warranty won't cover the entire lifespan.
- Don't install the QuiPower Core on flammable building materials or near explosive materials.

  – Open the front cover by unlocking the cam lock and using the service key provided.




  – Attach the QuiPower Core with screws and dowels suitable for the wall material.



## 4.3. Connection

**⚠ ELECTRIC SHOCK RISK!**

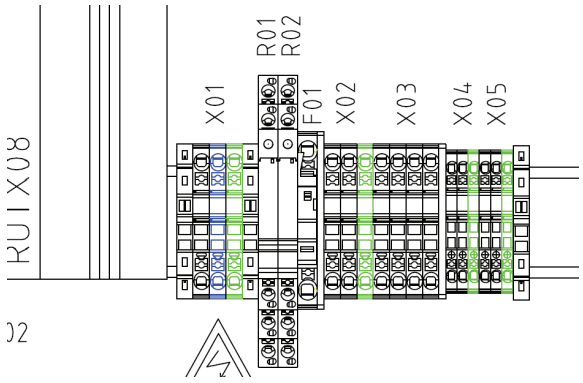
- Turn off the main supply and ensure there's no voltage before installing.

**⚠ CAUTION!**

- Ensure all phases are within the limits and the connection to neutral and protective earth are correct.
- Perform a continuity check to verify the connection PE.
- Install according to the electrical drawing.

**⚠ NOTE!**

- The maximum cable length for all connections is <30 meters, excluding the main supply cable and optional cable from terminal X03.
- Don't use cables whose losses exceed 1%.
- Use only cables with the correct dimensions according to the electrical drawing.
- All cables must be routed through the cable glands on the underside of the QuiPower Core.




### 4.3.1. Main Supply (X01)

**⚠ ELECTRIC SHOCK RISK!**

- Turn off the main power supply and ensure there's no voltage before installation.

**⚠ NOTE!**

- Check all connections and re-tighten them if necessary.

  – Connect the intended main supply cable to terminal X01.

**⚠ CAUTION!**

- **DON'T TURN ON THE MAIN POWER SUPPLY!**

### 4.3.2. Optional - SG Ready (R01 and R02)

The R01 and R02 relays are intended for controlling devices with Smart Grid Ready functionality.

**⚠ CAUTION!**

- Minimum switching current 10 mA (12 V).
- Mustn't be used as safety stop for critical functions.
- It must be possible to bypass the connection in the event of a fault and the SG Ready device should be operated manually.

  – Connect a SG Ready device to relays R01 and R02 according to the electrical drawing.

### 4.3.3. Optional - External 24VDC (X02)

The external 24VDC supply is optional and intended to supply the QuiPower Core in Off-grid mode. For this, the system setup connected to QuiPower Core must be prepared with Off-grid functionality.

– Connect the external 24VDC supply to terminal X02.

### 4.3.4. Optional - Open Drain (X03)

The open drain terminal is reserved for future use.

**⚠ NOTE!**

- The maximum cable length is <3 meters.

### 4.3.5. RS485 (X04)

The RS485 port is reserved for communication with the QuiPower inverter. Further installation instructions can be found in the separate manual of the inverter.

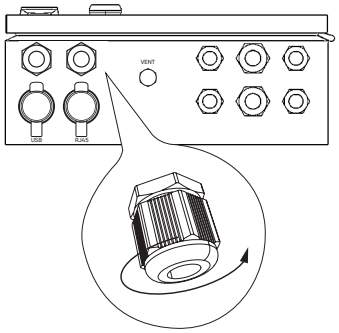
– Connect the designated RS485 cable to terminal X04.

### 4.3.6. Optional - CAN (X05)

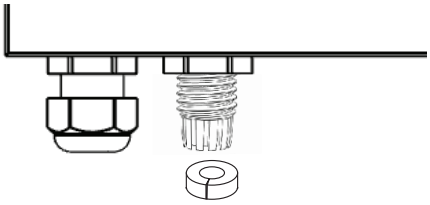
The CAN bus terminal is reserved for future use.

## 4.4. Network Connection

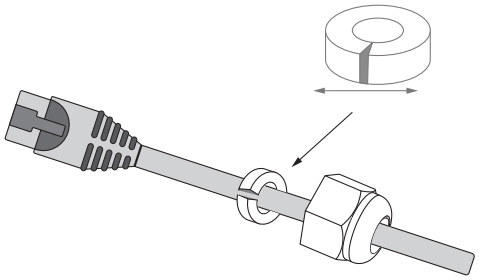
1. Unscrew the M20 cable gland nut closest to the RJ45 input.



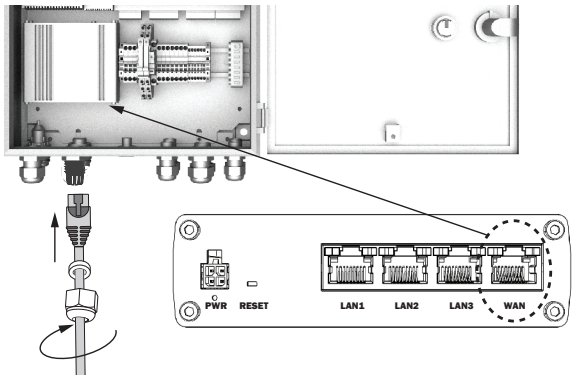
2. Remove the cable gland seal.



3. Insert the cable gland nut and seal through the network cable. The seal can be opened.



4. Open the front cove and pull the network cable in through the cable gland hole and up towards the router.




5. Plug the network cable into the WAN port of the router (the input to the most right).
6. Push back the seal and tighten the cable gland nut.
7. Close the front cover.

# 5. Commissioning Preparation

- Plan the QuiPower System installation according to the system drawing, please see the section Schematics.
- Make sure you have enough space for each device and always follow the instructions in each manual.

⚠ **NOTE!**

- All electrical connections must be made according to the system drawing from Enequi.
- Always follow instructions from Enequi for settings and programming.
- Always follow safety instructions for each device.
- Only task-competent personnel trained by Enequi are allowed to install and connect QuiPower System.

Make sure to download and read the manuals and electrical drawings for all devices before proceeding to install and connect the QuiPower System.

## 5.1. QuiPower Storage

- To install the QuiPower Storage, please follow the instructions in the manual.

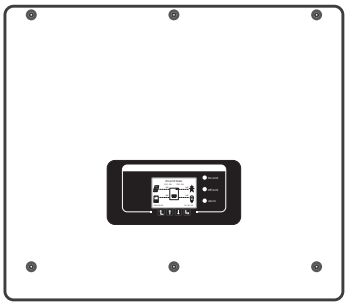
Please click on or scan the QR code below:

AMASS GTX 3000-H

## 5.2. Inverter

- To mount the inverter, follow the manufacturer's instructions and recommendations.
- Follow instructions from Enequi for settings and programming.

SOFAR HYD 5-20KTL-3PH



## 5.3. Energy Meter

- Installation of the energy meter must be done according to the inverter manual.
- The energy meter comes pre-programmed from the factory, no changes need to be made.

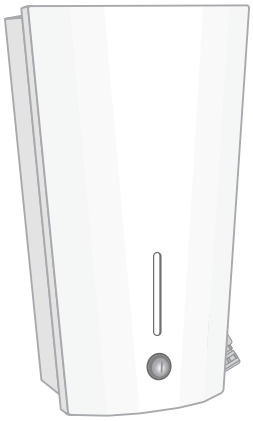
Please click on or scan the QR code below:

Energy Meter

## 5.4. Car Charger (optional)

- Follow the instruction in Car Charger manual for mounting and connecting the car charger.

Car Charger



# 6. Commissioning

**⚠ CAUTION!**

- Check that all phases are within limits and that the connection to neutral and protective earth is correct.
- Perform a continuity check to verify the connection PE.

**⚠ NOTE!**

- Make sure all connections are correct according to the electrical drawing and re-tighten them if necessary.

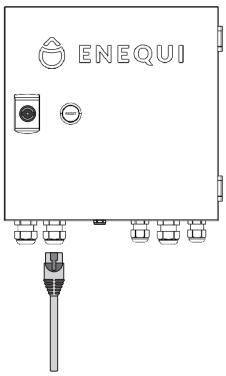
  – Turn on the main power supply.

## 6.1. Remote Commissioning

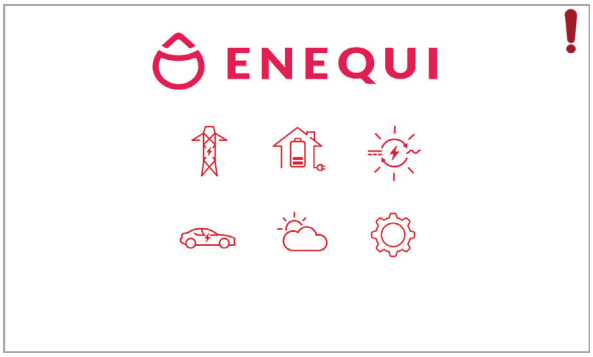
– Remote commissioning may be required to complete the installation. Please contact Enequi support on telephone number +46 (0)10 – 122 17 00.

– For more contact information, please visit www.enequi.com

## 6.2. Connect to QuiPower Interface




1. Connect a network cable to the RJ45 port and the other end to a computer.
2. Click on the link below or copy the URL into any web browser: http://192.168.148.201:8080/webvisu.htm
3. The connection to the QuiPower Interface is successful when the browser displays the home screen.




## 6.3. QuiPower Interface

Due to impending changes, Enequi has decided not to include the part about the QuiPower interface in this manual. The full manual is available Online and can be downloaded from the link below.

Please click or scan the QR code below:

QuiPower Core Manual

# 7. QuiPower App

The QuiPower app lets you control energy use in your home on your smartphone. Available for iOS and Android or any web browser.

Please click or scan the QR code below:

Download on the App Store

QuiPower app

GET IT ON Google Play

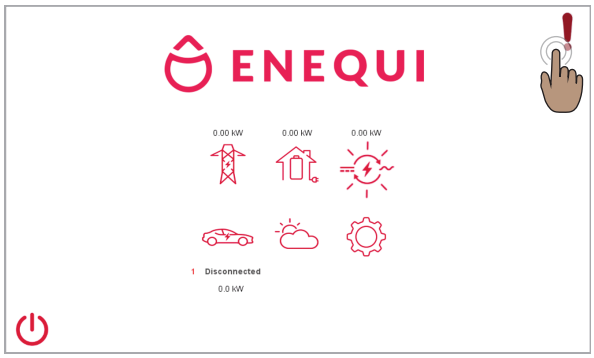
QuiPower app

Or visit https://portal.enequi.com/login.

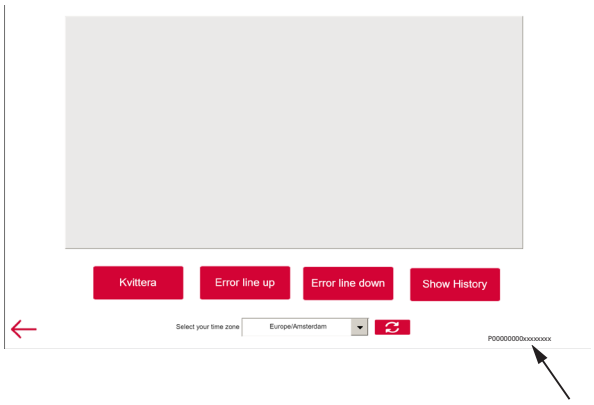
## 7.1. QuiPower Storage Serial Number

To activate the app, you need a unique serial number, which can be find on the QuiPower user interface under the "Fault" screen.

– Tap ! to access the Fault screen.




– The unique serial number can be found at the bottom of the screen.




## 7.2. QuiPower app Manual

For safe operation, please download and read the QuiPower app manual.

Please click or scan the QR code below:

QuiPower app Manual

# 8. Maintenance

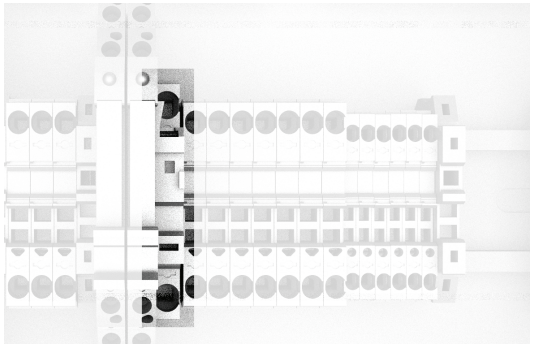
**⚠ CAUTION!**

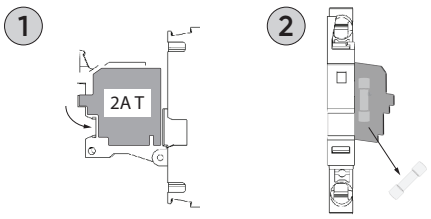
- QuiPower Core should only be repaired or modified by qualified personnel. To ensure the safety of the user and the environment, use only original spare parts available from your supplier.

## 8.1. Replacing the Fuse F01

**⚠ ELECTRIC SHOCK RISK!**

- Switch off the main power supply and ensure no voltage is present before performing any maintenance work.






The fuse in terminal F01 is of type 2A T.

1. Use the service key provided to open the front cover by unlocking the cam lock.
2. Open the fuse holder slot by pressing the slot to the right.
3. Remove the old fuse.
4. Insert a new fuse, type 2A T.
5. Press the slot firmly shut again.
6. Close and lock the front cover.

## 8.2. Inspection and Monitoring

For functional and safety reasons, the customer is responsible for performing periodic inspections of the QuiPower Core operating environment.

- Visually inspect the QuiPower Core for external signs of damage.
- Visually inspect all cable connections.
- Check for general appearance and cleanliness. Clean the QuiPower Core with a dry cloth if necessary.

If any damage has occurred please contact Enequi support for consultation at +46 (0)10 – 122 17 00.

For more contact information, please visit www.enequi.com.

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# Schematics

## 9.1. System Drawings

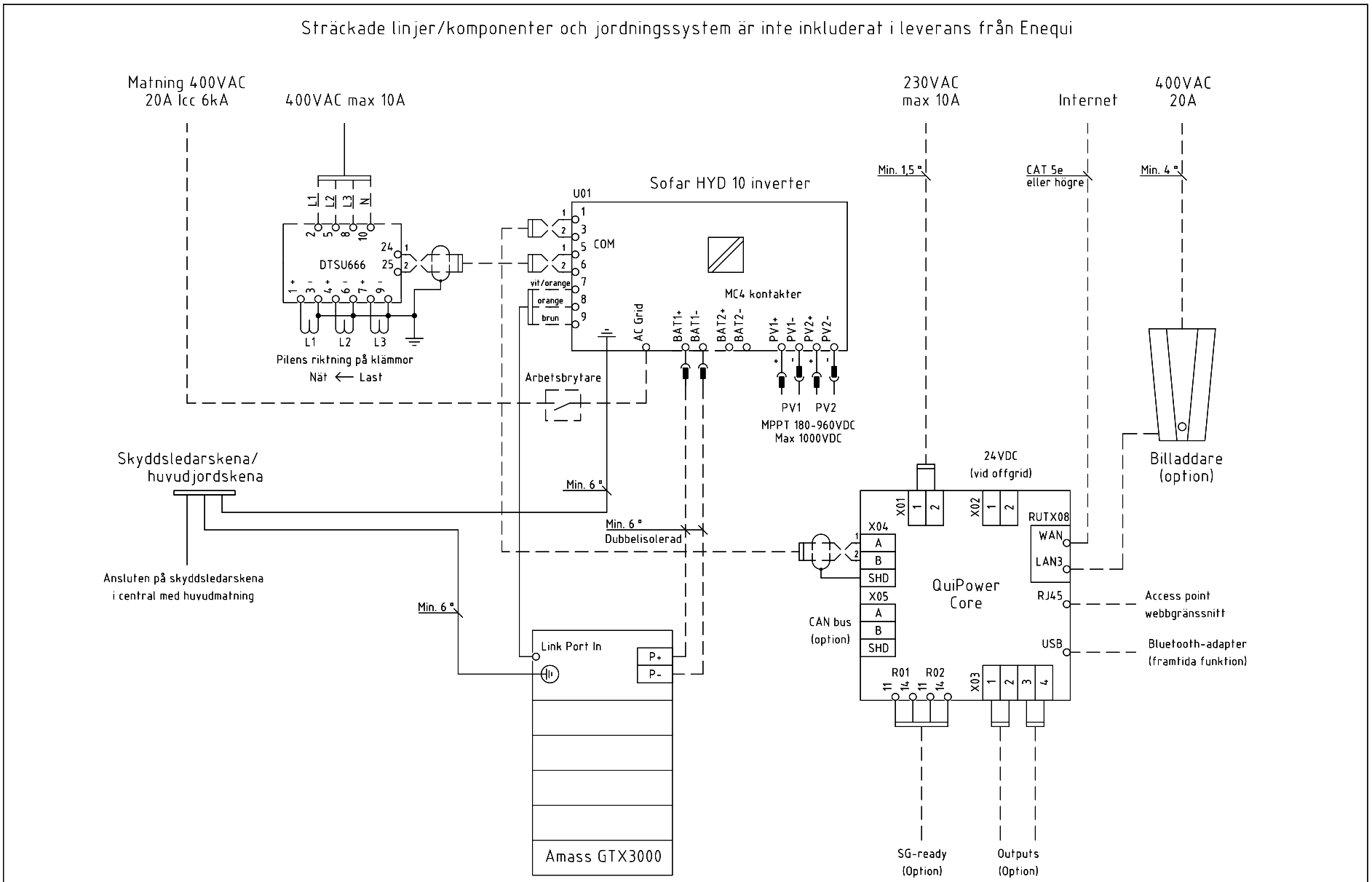
Please download the latest system drawing, choose the right QR code depending on the system configuration.

Click on or scan the QR code below.

3-820270 System
HYD 10 - R1

3-820271 System
HYD 15 - R1

3-820272 System
HYD 20 - R1




Systeminstallationen ska, utöver elinstallationsreglerna, följa kraven enligt standarder för elektriska energilagringssystem (EES) TS 62933-5-1 och EN IEC 62933-5-2

| NR. | ÄNDRING | SIGN. | DATUM |
|---|---|---|---|

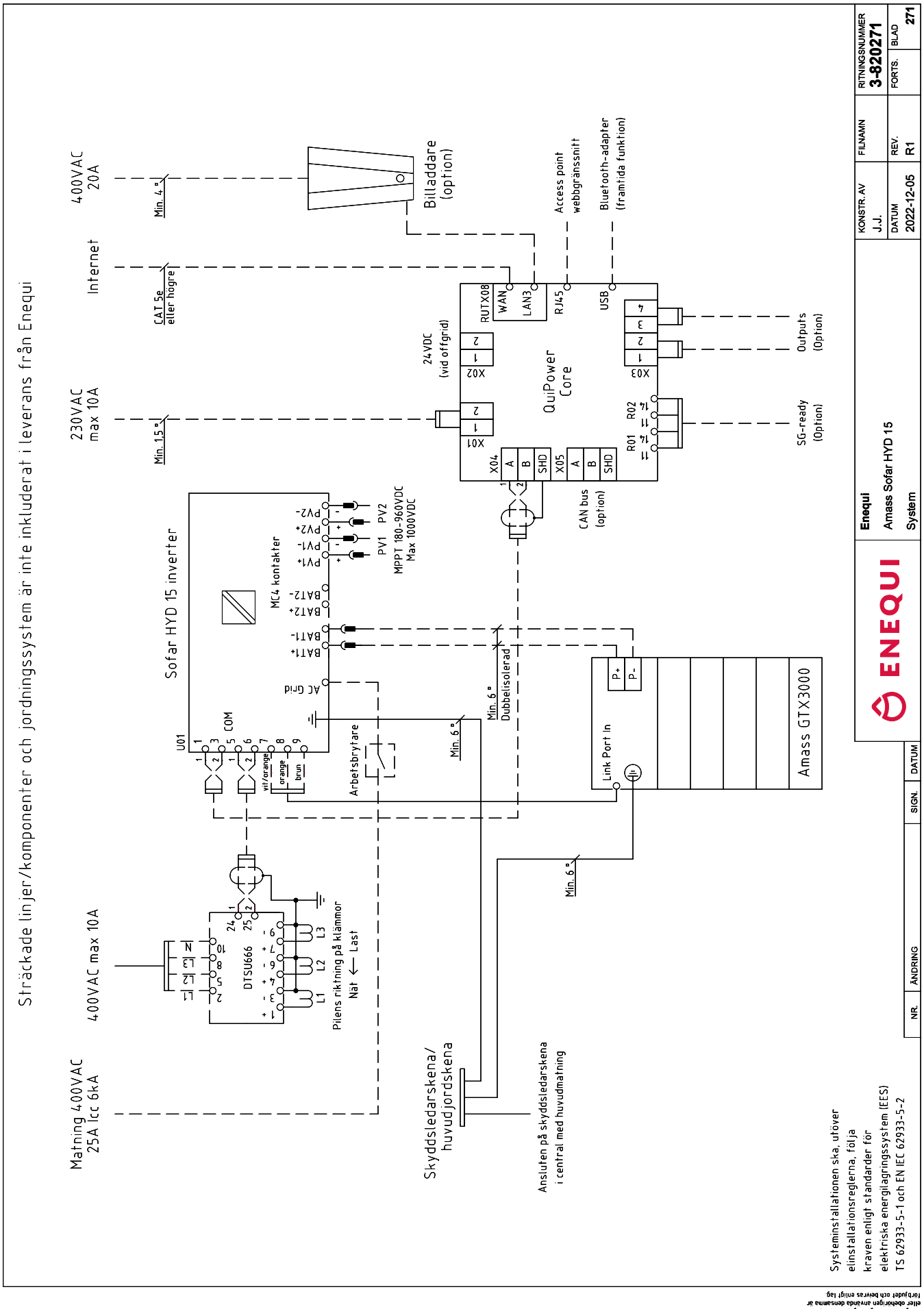
ENEQUI

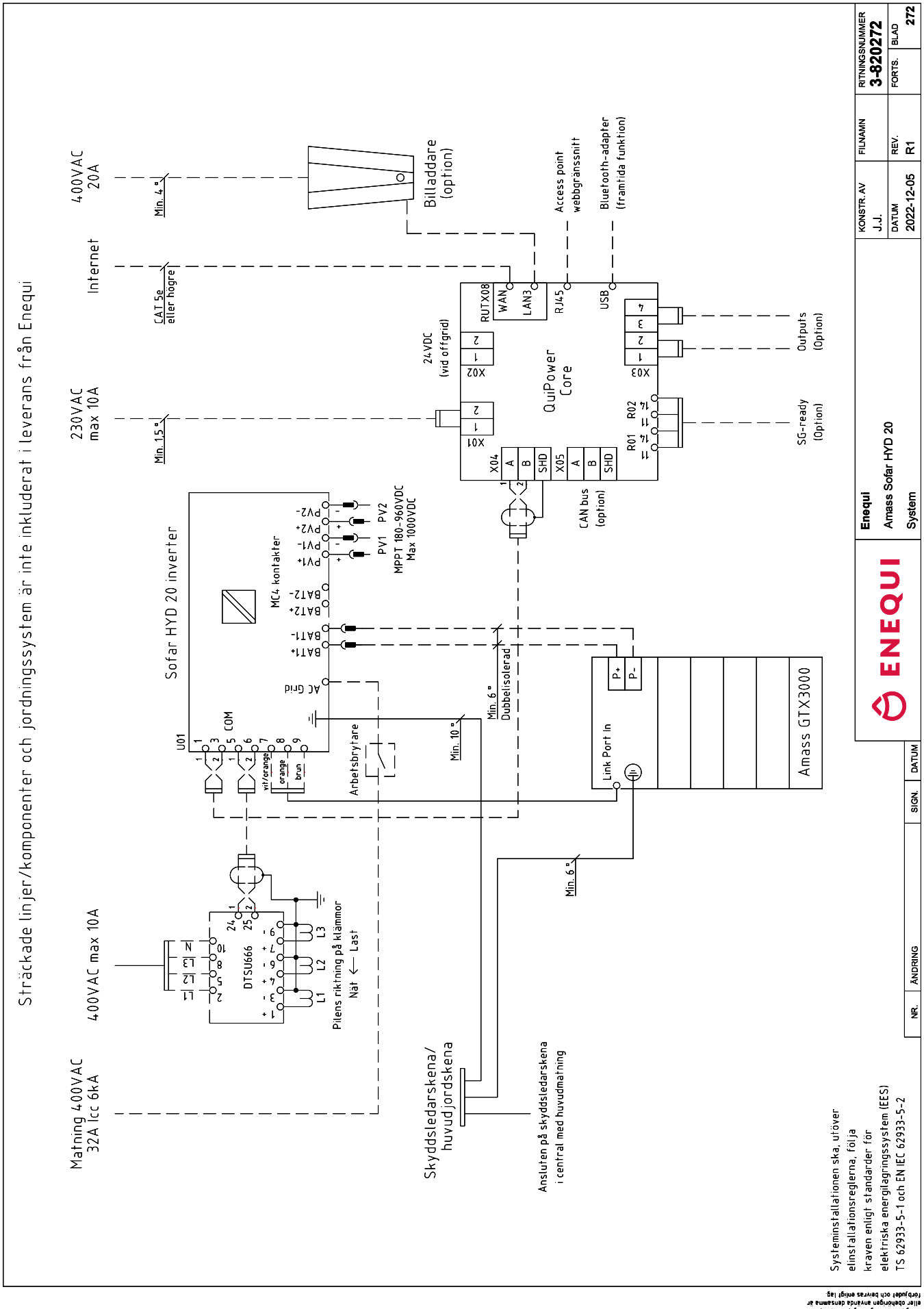
**Enequi**

Amass Sofar HYD 10

System

| KONSTR. AV | FILNAMN | RITNINGSNUMMER |
|---|---|---|
| J.J. | | 3-820270 |
| DATUM | REV. | FORTS. / BLAD |
| 2022-12-05 | R1 | 270 |


Sträckade linjer/komponenter och jordningssystem är inte inkluderat i leverans från Enequi
Matning 400VAC
25A Icc 6kA
400VAC max 10A
230VAC
max 10A
400VAC
20A
Internet
CAT 5e
eller högre
Min. 4 st
Min. 15 st
Billaddare
(option)
Access point
webbgränssnitt
Bluetooth-adapter
(framtida funktion)
24VDC
(vid offgrid)
RUTX08
WAN
LAN3
RJ45
USB
X01
X02
X03
X04
X05
QuiPower
Core
R01
R02
Outputs
(Option)
SG-ready
(Option)
CAN bus
(option)
A
B
SHD
Sofar HYD 15 inverter
U01
COM
MC4 kontakter
PV1+
PV1-
PV2+
PV2-
PV1
PV2
MPPT 180-960VDC
Max 1000VDC
BAT1+
BAT1-
BAT2+
BAT2-
AC Grid
vit/orange
orange
brun
Arbetsbrytare
Min. 6 st
Dubbelisolerad
P+
P-
Link Port In
Amass GTX3000
DTSU666
L1 L2 L3
N
Pilens riktning på klämmor
Nät ← Last
Skyddsledarskena/
huvudjordskena
Ansluten på skyddsledarskena
i central med huvudmatning
ENEQUI
Enequi
Amass Sofar HYD 15
System
KONSTR.AV
J.J.
DATUM
2022-12-05
FILNAMN
REV.
R1
RITNINGSNUMMER
3-820271
FORTS.
BLAD
271
NR.
ÄNDRING
SIGN.
DATUM
Systeminstallationen ska, utöver
elinstallationsreglerna, följa
kraven enligt standarder för
elektriska energilagringssystem (EES)
TS 62933-5-1 och EN IEC 62933-5-2
Denna ritning förblir vår egendom. Att utan
medgivande mångfaldiga, återvisa, utlämna
eller obehörigen använda densamma är
förbjudet och beivras enligt lag

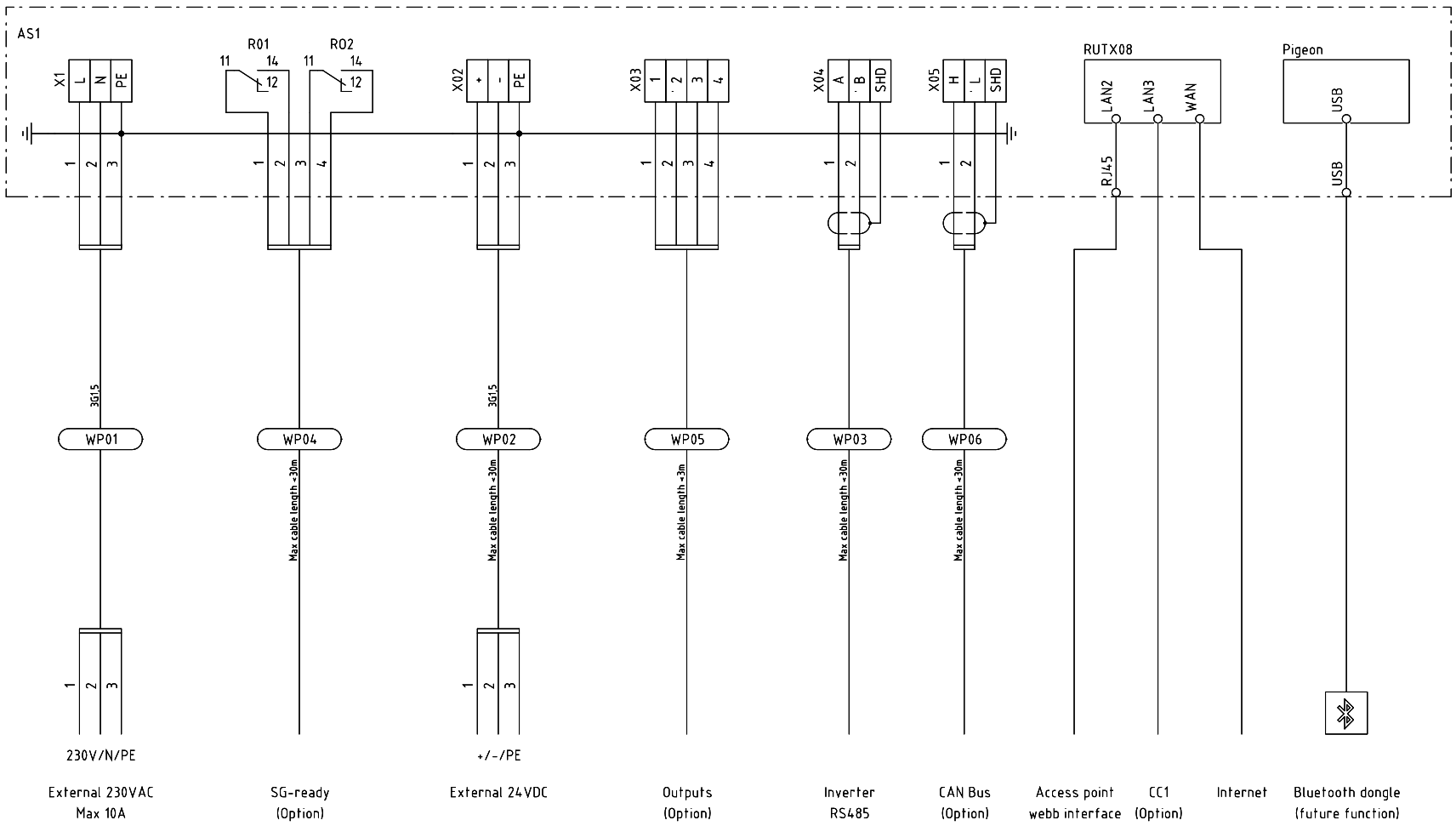

Sträckade linjer/komponenter och jordningssystem är inte inkluderat i leverans från Enequi
Matning 400VAC
32A Icc 6kA
400VAC max 10A
230VAC
max 10A
400VAC
20A
Internet
CAT 5e
eller högre
Min. 4 "
Min. 15 "
Billaddare
(option)
Access point
webbgränssnitt
Bluetooth-adapter
(framtida funktion)
RJ45
USB
RUTX08
WAN
LAN3
24VDC
(vid offgrid)
X01
X02
X03
X04
X05
A
B
SHD
QuiPower
Core
R01
R02
Outputs
(Option)
SG-ready
(Option)
CAN bus
(option)
Sofar HYD 20 inverter
U01
COM
AC Grid
BAT1+
BAT1-
BAT2+
BAT2-
PV1+
PV1-
PV2+
PV2-
PV1
PV2
MPPT 180-960VDC
Max 1000VDC
MC4 kontakter
vit/orange
orange
brun
Arbetsbrytare
Min. 10 "
Min. 6 "
Dubbelisolerad
Link Port In
P+
P-
Amass GTX3000
DTSU666
L1
L2
L3
N
Pilens riktning på klämmor
Nät ← Last
Skyddsledarskena/
huvudjordskena
Ansluten på skyddsledarskena
i central med huvudmatning
Enequi
Amass Sofar HYD 20
System
KONSTR.AV
J.J.
DATUM
2022-12-05
FILNAMN
REV.
R1
RITNINGSNUMMER
3-820272
FORTS.
BLAD
272
NR.
ÄNDRING
SIGN.
DATUM
Systeminstallationen ska, utöver
elinstallationsreglerna, följa
kraven enligt standarder för
elektriska energilagringssystem (EES)
TS 62933-5-1 och EN IEC 62933-5-2
Denna ritning förblir vår egendom. Att utan
medgivande mångfaldiga, förevisa, utlämna
eller obehörigen använda densamma är
förbjudet och bevaras enligt lag

## 9.2. Electrical Drawings

Installers and users are advised to download the latest version of the electrical drawing.

Click on or scan the QR code below.

3-820233 QPO
Central HYD 10 R1






| NR. | CHANGE | SIGN. | DATE |
|---|---|---|---|

ENEQUI

**Enequi 300470**

QuiPower Core

External connections

| CONSTR. BY | FILE NAME | DRAWING NUMBER |
|---|---|---|
| J.J. | | 3-820230E |
| DATE | REV. | CONT. / SHEET |
| 2022-10-13 | R1 | - / 06 |

# 10. Exclusion of Liability

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Enequi disclaims any liability for direct or indirect damages resulting from the following:

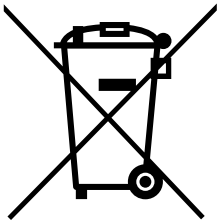
- Improper installation or operation.
- Modifications, alterations or attempted repairs.
- Improper use or operation.
- Unsuitable ambient temperature.
- Failure to comply with applicable safety standards or regulations.
- Flooding, lightning, overvoltage, storm, fire (forces of nature).

Enequi reserves the right to make changes that improve the function of the QuiPower Core.

# 11. Disposal

⚠ **NOTE!**

- Improper disposal of the product by the user may result in administrative penalties in accordance with current legislation.
- The product's packaging must be disposed of by the installer or at a special waste station.
- Dispose of the product in accordance with the legislation of the country in which it is installed.



Do not dispose of the product with normal household waste.
The product contains electrical components.
Dispose of it as hazardous waste.

Original QuiPower Core Installation Manual. 2023-01-18

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