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easee E02-EQP Three Phase Equalizer Kit User Guide

Contents

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ease E02-EQP Three Phase Equalizer Kit

Product Overview

The UK Three Phase Equalizer Kit is designed for installing an Easee Equalizer on a charging site with one or multiple circuits. The kit includes tested and guaranteed components that work with the Easee Equalizer (E02-EQP). Please note that it is not compatible with the Easee Equalizer HAN version.

- **Energy Meter:** Eastron SDM630MCT-RJ12
- **Cable:** RJ12 6P6C 1.5m Cable x2
- **Current Sensor:** CT Clamp – ESCT-TU24 (3m length) Rogowski Coil
    - ESCT-RC60
- **Connector:** CRJ-31 RJ12 Connector

Technical Specifications

- **RJ12 cable Length:** 1.5m
- **Connector plug:** RJ12
- **Lead cable:** 6 pin

WARNING! This product should only be installed, repaired, or serviced by a suitable competent and qualified electrician. Adhere to all applicable local, regional, and national regulations for electrical installations.

Before starting the installation, please check the safety instructions provided in the manufacturer's user guides for all the components of the kit.

Make sure you have enough space on the DIN rail to accommodate all the components. The minimum required

space is 126mm or 7Modules.

The cable to the modbus can be extended up to 200 meters. Use an appropriate specification of cable for the installation method.

Ensure that the Equalizer and the master charger(s) are connected to the same WiFi network. The Equalizer requires a connection to a suitable and secure WiFi network for correct operation.

For the correct orientation of Rogowski Coils, please refer to the user guides.

Install a 10A triple pole fuse.

Install the Easee Installer App on your phone by using the provided QR code.

Product Usage Instructions

Equalizer Kit Installation

WARNING! Turn off the power before beginning the installation. Use extreme caution and follow instructions carefully.

Install the components in the distribution box according to the wiring diagram provided.

Equalizer Setup

1. Download the Easee Installer App from the App Store or Google Play.
2. To use the Easee Installer App, you must have an Easee Cloud account. If you already have an account, you can log in immediately.
3. If you haven't created a site yet, follow these steps:
   - Fill in the site information.
   - Select Easee as the operator.
   - Input the main fuse size.
   - Input circuit fuse size and name.
   - Input WiFi information, if available.
   - Scan the backplate and complete the site.
4. Under Site Structure, add the Equalizer.
5. Input WiFi information.
6. Scan the Equalizer with your phone's NFC reader.
7. Connect the Equalizer to the meter reader.
8. Update the Equalizer to at least V114 (approximately 10 minutes).
9. Set the meter type to Eastron SDM.
10. Set the main fuse limit to 100%.
11. Set circuits for load balancing to Circuit (on).
12. Restart the device.

Product Overview

- This kit consists of the main components required to install an Easee Equalizer on a charging site with one or multiple circuits. All of the components are tested and guaranteed to work with the
- Easee Equalizer (E02-EQP). Not for use with the
- Easee Equalizer HAN version.

Energy Meter:
Eastron SDM630MCT-RJ12
Cable:
RJ12 6P6C 1.5m Cable x2
Current Sensor:
CT Clamp – ESCT-TU24 (3m length)
Rogowski Coil – ESCT-RC60
Connector:
CRJ-31 RJ12 Connector

Technical specifications

Eastron SDM630MCT-RJ12

- **Measurements (mm):** H: 94,5 x W: 72 x D: 65
- **Voltage:** 3 x 400V ac / 230V ac
- **Network frequency:** 50/60Hz (± 2%)
- **Type:** 3-phase 400 imp/kWh
- **IP-classification:** IP51
- **Running temperature:** -25°C – 55°C
- **Primary connection:** 2,5mm2
- **100A Current Input:** RJ12 100mA CT Clamp
- **500A Current Input:** RJ12 85-100mV | 1KA
- **Output connection:** RJ12 6P6C
- **Mounting:** DIN-rail or alternative wall mount with screw
- **Material:** Self-extinguishing Ul94 V-0

RJ12 cable

- **Length:** 1.5m
- **Connector plug:** RJ12
- **Lead cable:** 6 pin

100A KIT CT Clamps

- **Input:** Max 100A
- **Output:** 100mA
- **Measurements (mm):** H: 46 W: 29
- **Diameter:** 15.7 mm
- **Running temperature:** -15°C – +60°C

500A KIT Rogowski Coils

- **Input:** 500A
- **Output:** 85-100 mV | 1KA
- **Measurements (mm):** L: 200
- **Diameter:** 45-60 mm
- **Running temperature:** -30°C – +80°C

Before you start

WARNING! This product shall only be installed, repaired or serviced by a suitable competent, and qualified electrician. All applicable local, regional, and national regulations for electrical installations must be adhered to.

- Please check the safety instructions on the manufacturer's user guides for all the components of the kit.
- Make sure you have enough space on the DIN rail for all the components. The minimum required space is 126mm or 7 Modules
- The cable to the modbus can be extended up to 200 meters. Please use the appropriate specifications of cable for the installation method.
- Ensure the Equalizer and the master charger (s) will be connected to the same WiFi network. The Equalizer requires connection toa suitable and secure wifi network to ensure correct operation.
- Main distribution unit or secondary distribution unit/facade meter reader unit.
- Rogowski Coils must be fitted in the correct orientation to read the incoming power line.
- 10A triple pole fuse
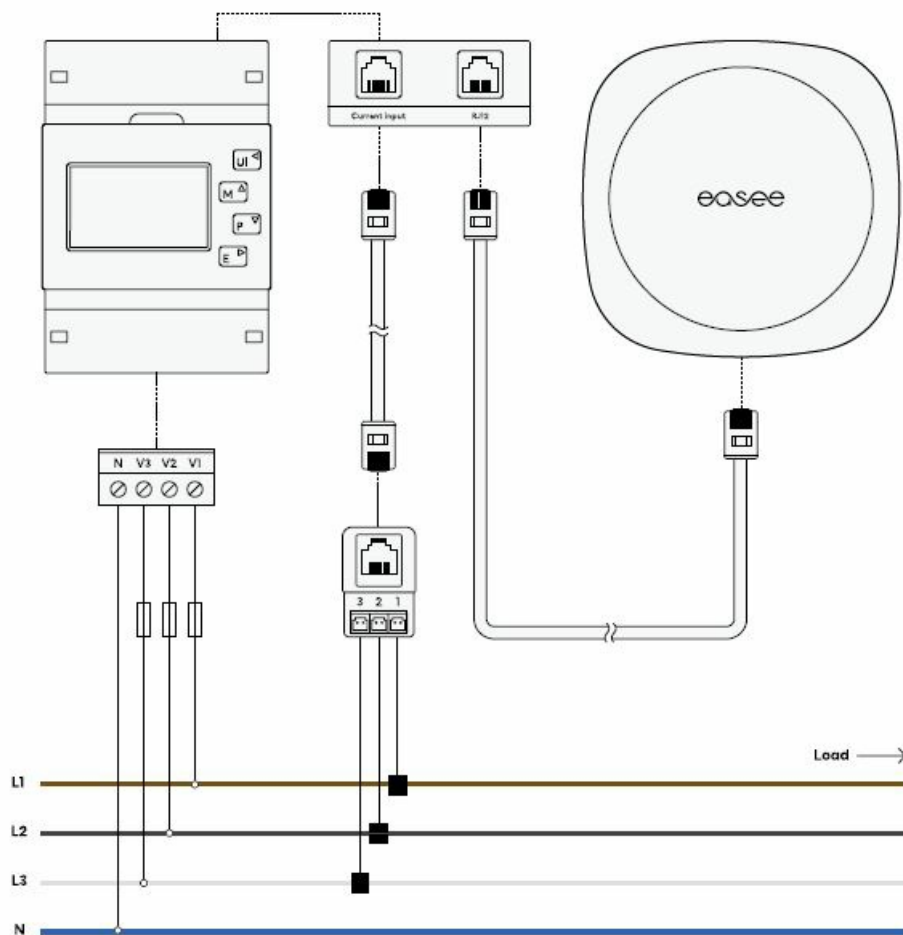- Install the Easee Installer App on your phone by using the QR code below.

TIPS! Prepare installation in a new encapsulation (not included):

- 4 Modules for Eastron 3-phase meter reader.
- 3 Modules for fuse 10A triple pole fuse (Eastron 3-phase meter reader).
- 3 Modules for the fuse of Easee Charging Robot (not included)

Installing

WARNING! Turn off the power before you begin the installation. Use extreme caution and follow instructions carefully.

- Install the components in the distribution box according to the wiring diagram below:
- Wiring
- Connection
- ■ CT clamps

Setting up

Download the Easee Installer App via App store or Google play. To use the Easee Installer App, you must have an Easee Cloud account. If you already have an account, you can log in immediately.

If you have created a site already, then please skip directly to step 2.

Create a new Site:

- Fill in the site information.
- Select Easee as the operator.
- Input Main fuse size
- Input Circuit fuse size and name.
- Input Wifi information, if available.
- Scan the backplate and complete the site.

Equalizer.
Under Site Structure:

- Add Equalizer.
- Input Wifi information.
- Scan Equalizer with your phone's NFC reader.
- Connect the Equalizer to the meter reader.
- Update Equalizer to at least V114 (~ 10 min).

- Set meter type → Eastron SDM
- Set main fuse limit → 100%.
- Set circuits for load balancing → Circuit (on).
- Restart the device.

Transfer ownership.
At Site Overview:

- Upload to cloud.
- Invite new owner by phone number (you remain the administrator).
- Ask the customer to download the Easee app and create an Easee cloud account. If an account already exists, the customer needs to accept the ownership request which is sent via email.

Troubleshooting

Is the charger already installed? If the charger is already installed you will need to be invited as an administrator to access it in the Easee Installer App.

- Do this by asking the site owner to invite you as an administrator via the Easee Cloud, or
- Add the charger (master) to the user's Easee app with the serial number and pin code.

Then you will automatically become an administrator and will find the site under "update existing site" in the Easee Installer App. Note that you must be logged in with the same account in the Easee app as for your Easee Installer App for this step to work.

I can't connect the Equalizer to the Wi-Fi via the Easee Installer App. If you are unable to connect the device to the Wi-Fi, check the following:

- The name and the password of the Wi-Fi. Be sure to check lowercase and uppercase letters as well as special characters. If you have the option to rename the Wi-Fi, only use letters and numbers, and avoid special characters and spaces.
- The Wi-Fi must have a password, it can't be an open Wi-Fi.
- Connected on 2.4 GHz Wi-Fi (5 GHz is notsupported).
- Firewalls or login portals blocking internet access.
- Make sure that the Equalizer has good coverage for Wi-Fi. Change the location of the Wi-Fi router and Equalizer. Open any garage doors and the facade meter cabinet to get as good coverage during the connection process as possible. Alternatively, install a Wi-Fi extender (Mesh).

How to connect the Equalizer via the Charging Robot. If you do not succeed in connecting the Equalizer to Wi-Fi via the Easee Installer App, you can try moving the Equalizer toward the Charging Robot until the box displays a green light.

- Ensure that the charger is connected to the same Wi-Fi that you want the Equalizer to be connected to. This is due to the name and password being copied over when you scan the devices.
- If the Wi-Fi is not already available, connect the Charging Robot via the Easee Cloud, the Easee app or via the Charging Robot's Wi-Fi interface.

I am receiving negative values on my meter reader. Check the following:

- The arrows on the Rogowski coils or CT clamps are connected in the right direction.
- The phase sequence control by measured on the Charging Robot with a voltage meter.
- That the connection is correct from the fuse to the meter reader. Note on the wiring diagram that the connection on the meter has the sequence L3, L2, L1 from below.
- If the site has solar cells, it can show negative values during production.

The meter reader shows abnormal values or no values. Check the following:

- The Charging Robot and the meter reader are installed in the same phase sequence. If switching has taken place in the house e.g.L2, L1, L3 the phase sequences need to be adjusted for the phase angle to be correct. Please contact Easee Customer Excellence to adjust the phase sequence in the Equalizer. Switching on the meter reader may need to be done, therefore an installer needs to be in place during this troubleshooting.

Equalizer is offline. Do the following steps:

- Check that the Charging Robot is connected to Wi-Fi.
- Disconnect the Equalizer from the meter reader until it stops flashing.
- Hold the Equalizer against the Charging Robot until it lights up green.
- Reconnect the Equalizer to the meter reader.
- If the Equalizer does not appear in these Installer App, the signal is too weak. Reposition Wi-Fi or Equalizer to get a stronger signal. If necessary, install a Wi-Fi extender (Mesh) for a portable connection.

How to make sure the Equalizer is displaying the correct values? Do the following steps:

Via the Easee Installer App, go to Site Overview → Site Structure → Equalizer, you can click on theproduct card and get the same visual image of the Equalizer that the customer gets via theirEasee app.

Here you can confirm that the same ampere values are displayed as on the Eastron meter. Ampere values can be found on the Eastronmeter by clicking on [U / I] and scrolling to ampere values (A).

Ampere values screen

LED colors meaning

- White, fast flashing – Booting

- White, breathing every 10s – Normal operation

- Red/white, switching – No WiFi added

- Red, flashing – No data from power meter4

- Red, breathing every 10s – Error5

- Purple, breathing every 10s – Offline operation6

- Touch the Easee logo in the middle to check power consumption:

- Blue, fast flashing – High power consumption Blue, slow flashing – Low power consumption The flashes for a percentage – 1 flash (10%), 2 flashes (20%), up to 10 flashes (100%)

- Hold the Easee logo for 3 seconds to check connectivity. You will see 2 flashes:

- 1st flash – Easee Link RF status7 2nd flash – WiFi status

- Green – Connected

- Red – Not connected

- 3 Use the Easee App to set up the WiFi.

- 4 Contact your utility company to activate the HAN port.

- 5 Go to http://easee.support.

- 6 Check your internet connection.

- 7 After booting, it can take a few minutes before the Easee Link RFTM status flashes green.

Assistance

- Make sure to have the serial numbers for the
- Easee charger and Equalizer for more rapid assistance.
- Easee Support
- **www.easee.com/uk/user-support**.

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- Easee ASA

  Vassbotnen 23

  4033 Stavanger, Norway
- **easee.com**.

Documents / Resources

easee Quick guide UK Three Phase Equalizer Guide	**easee E02-EQP Three Phase Equalizer Kit** [pdf] User Guide E02-EQP Three Phase Equalizer Kit, E02-EQP, Three Phase Equalizer Kit, Phase Equalizer Kit, Equalizer Kit

References

- **Easee â€" Shaping the future of electricity**
- **Easee â€" Shaping the future of electricity**
- **Easee | User support for Easee products**