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Installation of the Critical load CCU prior to the installation of our Battery Storage system.

Overview

The way our system works is that the battery is connected to the main supply of the house, either from a breaker in the main CCU or a sub-board installed for that purpose.

The Battery unit contains an inverter and storage batteries along with an anti-islanding switch.

This switch will isolate the Battery from the rest of the house in the event of a power-cut and loss of supply from the grid. This is a requirement by the Network so there is no danger of back-feed into the grid and endangering anyone working to repair a cable etc that may have caused the power-cut. These regulations also apply to the Solar PV installations.

To enable our customers to get the full benefit of having a battery and being able to use the battery during a power-cut, there is a critical load circuit connection, This is a sub CCU connected to the battery and supplied by the battery 24/7, The battery tops up from the Solar PV or mains to balance this load during normal usage. In the event of a power-cut the battery will continue to supply this CCU and the circuits attached while being isolated from the rest of the house.

Installation Requirements

There is a requirement for a change over switch to be installed on the supply to the critical load CCU. This enables the end user to choose if this CCU is supplied by the battery or the mains. This is just a 2 position switch next to the CCU. A recommended make and model is shown in the attached diagrams.

As to what circuits are put into the critical load CCU is up to the customer. We do not recommend overloading it as it is only a 25 amp supply and the more load, the shorter the battery life.

We normally recommend a lighting circuit (or 2), these can be moved from the main CCU. We also suggest a dedicated radial to supply the freezer and or anything else they feel they cannot live without.

The Mains supply to the Critical Load CCU will be supplied by a dedicated breaker in the main (or sub) CCU and is connected via the changeover switch.

The earthing arrangement for this CCU should be TT as the Anti-Islanding switch in the battery will also disconnect the earth.

The connection from the battery to the changeover switch will be installed by our operatives with the battery.

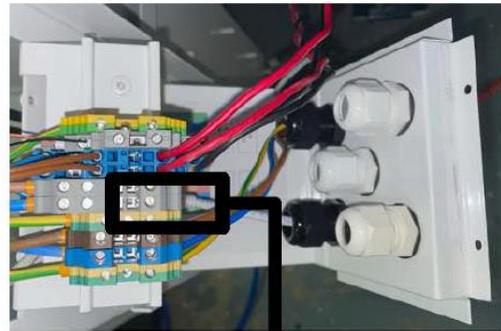
Installation Diagrams

Small consumer unit with critical circuits relocated from main distribution board (up to 25Amps)



* Local earthing is required e.g. earthing spike

Battery enclosure, critical circuit terminals – earth, neutral, live



Standard twin and earth cable

Schematic of changeover switch for critical circuits

