Battery Energy Storage System (BESS)
BASE LOAD POWER HUB

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Earthing Layout
E99-004

for Base Load Power Hub (BLPH) Project

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Table 1: Version overview

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Table 2: Approval overview

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Original document

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1 Introduction

1.1 About this Document

This document is part of the documentation for the Base Load Power Hub (BLPH) Project (K559-2254). In case of any contradiction resulting by the information or specification given in this document, phase 2 or later documents supersede the information provided in this document.

1.2 Display Elements

Symbol	Meaning
➜	Action with one or several steps for which the sequence is irrelevant.
Step 1 : **Step 2 :**	Action with several steps for which the sequence is relevant.
•	First level of list.
-	Second level of list.

Table 1: Display Elements

1.3 Other Applicable Documents

The following documents are applicable:

Document type	Document Name
BESS and PCS circuit diagram	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_20241105_V1.2
Extract of BESS and PCS circuit diagram (Earthing layout PCS)	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Eathing layout PCS
Extract of BESS and PCS circuit diagram (Earthing layout Battery 1)	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing layout Battery 1
Extract of BESS and PCS circuit diagram (Earthing layout Battery 2)	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing layout Battery 2

1.4 Generic Terms and Abbreviations Used

This following list should help you understand some of the abbreviations used in this document.

Generic Term and Abbreviation	Description
BESS	Battery Energy Storage System
BLPH	Base Load Power Hub
PCS	Power Conversion System

Table 2: Generic terms and abbreviations used

2 General

The description of the earthing layout is divided into two sections:

- External earthing layout: Earthing connections between the central earthing point and the three FREQCON containers
- Internal earthing layout: Earthing connections inside the FREQCON containers

2.1 External Earthing Layout

The external earthing layout is shown in the following figure.

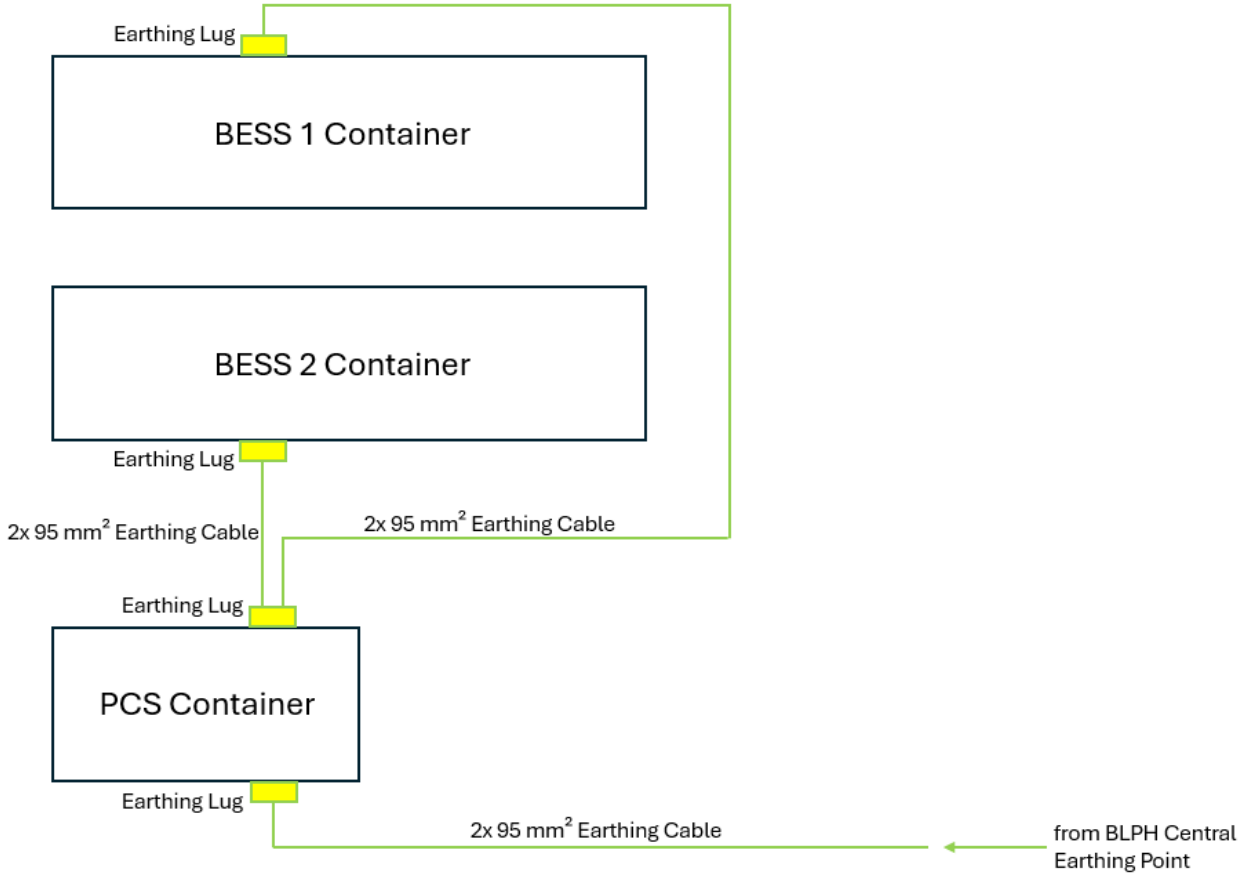


Figure 1: External earthing layout

2.2 Internal Earthing Layout

The internal earthing layout of the PCS and BESS containers are part of the circuit diagram of the complete system attached to this document (*see section 1.3 "Other Applicable Documents"*). The relevant pages are extracted into separate files as shown in the following table.

Container	Document Name
PCS	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout PCS
Battery 1	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout Battery 1
Battery 2	10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout Battery 2

3 Appendix

1. 10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_20241105_V1.2
2. 10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout PCS
3. 10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout Battery 1
4. 10354_23A2007_CAE_Statron_Shell Crosswind BESS FQ 1MW 5MWh Offshore_Earthing Layout Battery 2