Ballard Power Systems Europe A/S
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Revision history		
Rev.	**Date.**	**Description**
001	05/07/2024	First Issue
002	28/03/2025	Update after Comms Testing
003	28/03/2025	Reupload with cover page

Document Title:	**BLPH Project - Electrical Interface Documentation**
Document Number:	K559-2254-CWIWP4202202-E03-007
Revision:	Rev003
Sequence Number:	007
File Name:	K559-2254-CWIWP4202202-E03-007Rev003
Purchaser Job:	K559-2254
Purchase Order:	CWIWP4202202
Code:	E03
Requsition Number:	n/a
Customer:	CrossWind C.V., Rotterdam, The Netherlands

Electrical Interface Documentation for Rosetti Marino

Crosswind/Shell Baseload Power Hub, Fuel Cell Container 1MW, no BESS

Reference Item Number	Ballard Part # TBD		
EPLAN Project Name	601456B - Shell Baseload Power Hub		
EPLAN Revision	06		
EPLAN Project Pages	628		
=	++	+	& B03

REVISION INFORMATION
DESCRIPTION
DATE
05-Jul-24

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DRAWING	E03-007 Electrical Interfaces to RM	REVISION	06
DRAWING TITLE	Crosswind/Shell Baseload Power Hub, Fuel Cell Container 1MW, no BESS		
SHEET TYPE/DESC	Electrical Interface Documentation Introduction		
ALL SHEETS ARE THE SAME REVISION STATUS	SIZE A3	LANGUAGE EN	SHEET/TOTAL 1 / 12

Electrical Interface - 6,6kV

Location: 10ft Container, Side Entry

Responsibility matrix: K559-2254-SWIWP4202202-E99-003Rev001

=BA30+DA03
Power Output, 10ft Container

-TA30
1250kVA
400/6600V Transformer
Dry-type

2W 2V 2U

1U 1V 1W

Ballard Scope
Rosetti Marino Scope

=HKN70
RM Scope

Ballard provides bulkhead plate

-X01
70mm2, M12
Angled Cable Lug

-X02
70mm2, M12
Angled Cable Lug

-X03
70mm2, M12
Angled Cable Lug

-82003-CEM-1-L1
LSZH
1x70
6,6kV

-82003-CEM-1-L2
LSZH
1x70
6,6kV

-82003-CEM-1-L3
LSZH
1x70
6,6kV

-82003-CEM-1-L1
6,6kV MV Power

-82003-CEM-1-L2
6,6kV MV Power

-82003-CEM-1-L3
6,6kV MV Power

SG-100D1

RM Information taken from "123A90-DDL-EL-LIS-20148_CPI"

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EPLAN Project Name	601456B - Shell Baseload Power Hub
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29-Nov-24

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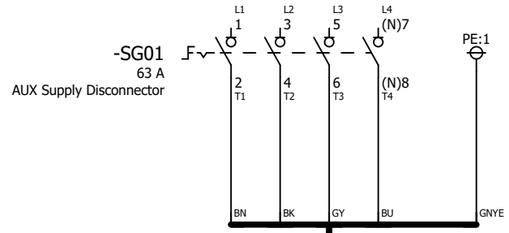
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SHEET TYPE/DESC	Electrical Interface - 6,6kV Connection		
ALL SHEETS ARE THE SAME REVISION STATUS	SIZE A3	LANGUAGE EN	SHEET/TOTAL 2 / 12

Electrical Interface - AUX Connection

Location: 40ft Container, Upper Left Corner

Responsibility matrix: K559-2254-SWIWP4202202-E99-003Rev001

=BA20+UC50
AC Distribution Cabinet, Inside 40ft Container



Cable length: 12 meters from interface point

Ballard Scope
Rosetti Marino Scope

=HKN70
RM Scope

-83012-CEL
LSZH
5x16
400V
Fuel Cell Auxillary Load

83012-CEL
AUX Power Supply

SG-200N1

RM Information taken from "123A90-DDL-EL-LIS-20148_CPI"

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SHEET TYPE/DESC	Electrical Interface - AUX Supply		
ALL SHEETS ARE THE SAME REVISION STATUS	SIZE A3	LANGUAGE EN	SHEET/TOTAL 3 / 12

Electrical Interface - Safety Connections

Location: 40ft Container,Top Side Entry

Responsibility matrix: K559-2254-SWIWP4202202-E99-003Rev001

=LB02+UC20
Control Cabinet, 40ft Container Inside

To Safety Control System

-KF52
24VDC
Customer Safety Input Relay

A1
A2

-R01
120 Ohm, 0,5W
Wire break
resistor
RM Scope

-KF51
+UC20&C03/55.6
Fire Detection
23
24
5
6

-KF53
+UC20&C03/55.7
Hydrogen Detection
23
24
7
8

-KF50
+UC20&C03/55.5
Safety Status
23
24
33
34
-X101
9
10
11
12

Cable length: 12 meters from interface point

Ballard Scope
Rosetti Marino Scope

>=EXT+
Customer Scope

C-80-XS-001
2x2.5
C-80-XS-001
1 2,5
2 2,5
4.1
4.1

C-80-XS-001 / B400-SIS-001

80-UCP-001
2x2x2.5
80-UCP-001
1 WH 2,5
2 WH 2,5
1 BK 2,5
2 BK 2,5
4.4
4.3
4.4
4.4

80-UCP-001 / B400-FGS-002

C-80-XA-003
1x2x2.5
C-80-XA-002
1 WH 2,5
1 BK 2,5
4.6
4.6

C-80-XA-003 / B400-SES-001

23 — 24 +UC20&C03/55.2
33 — 34 +UC20&C03/55.3

Expected behaviour:
- Conductor 1 24VDC, Conductor 2 0V - Safety OK, Relay ON
- Conductor 1 0V, Conductor 2 0V - Safety NOT OK, Relay OFF

KF51 Indicates Fire detection
KF53 Indicated Gas detection
Implemented with safety rated relay
- De-energized contacts (as shown): No Fire / Gas detection
- Energized contacts (opposite shown): Confirmed Fire/Gas

KF50 Indicates System Emergency Status
Implemented with safety rated relay
- Closed Contacts: FC Package OK
- Open Contacts: FC Package Safety Trip

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28-Mar-25

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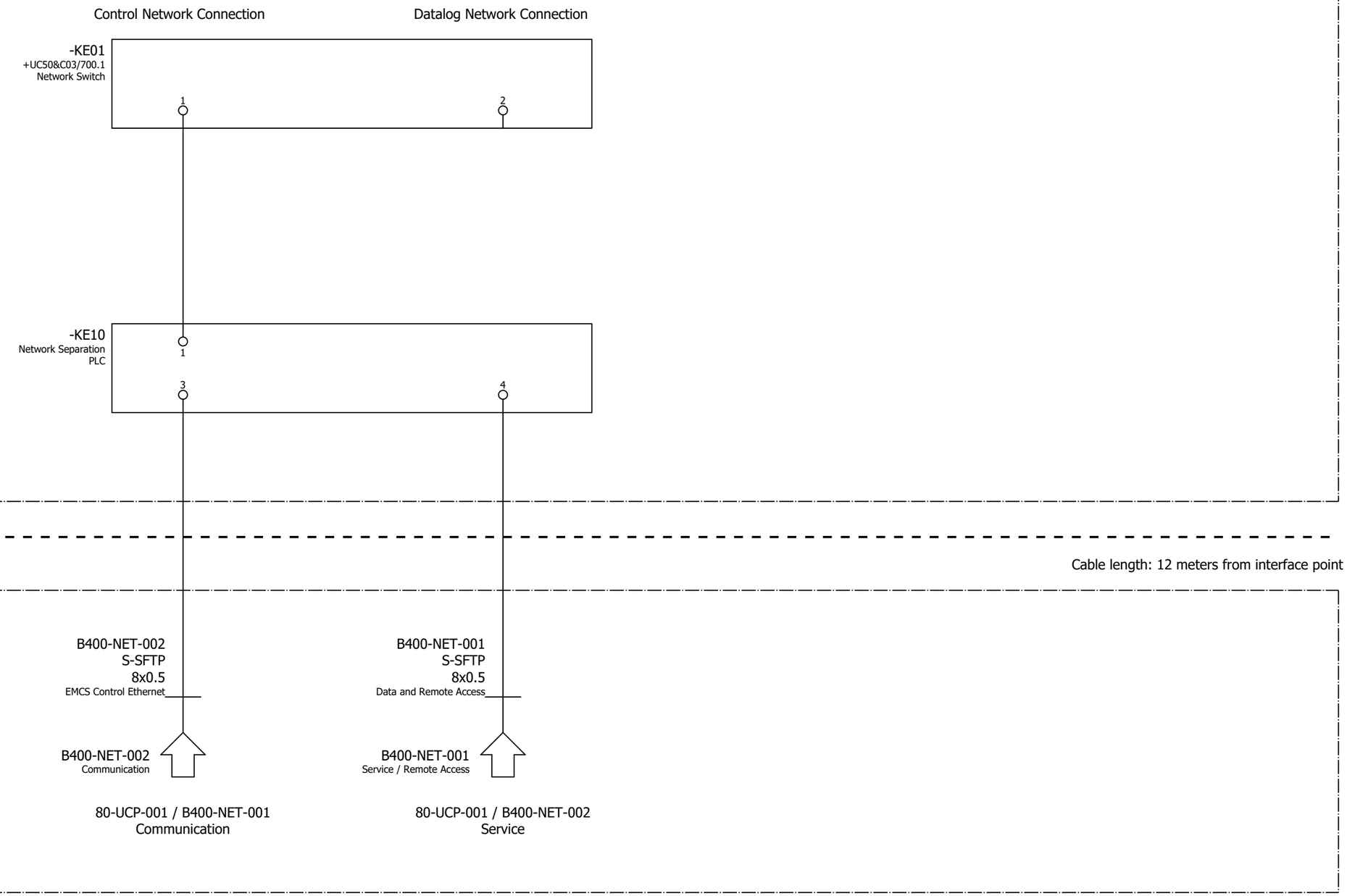
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SHEET TYPE/DESC	Electrical Interface - Safety		
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Electrical Interface - Network Connections

Responsibility matrix: K559-2254-SWIWP4202202-E99-003Rev001

Location: 40ft Container,Top Side Entry

=BA20+UC50
AC Distribution Cabinet, 40ft Container Inside



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SHEET TYPE/DESC	Electrical Interface - Network		
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