BASE LOAD POWER HUB (BLPH)

ELECTRICAL SINGLE LINE DIAGRAMS

DISTRIBUTION BOARD BoP

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
FRONT PAGE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20162

SHEET 001

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 02

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	001	FRONT PAGE	
02	002	SUMMARY / GENERAL NOTES / REFERENCE DOCUMENTS	
02	003	LEGEND	
02	004	LIGHTING SMALL POWER DB BoP DP200-N1	
02	005	LIGHTING SMALL POWER DB BoP DP200-N1	
02	006	LIGHTING SMALL POWER DB BoP DP200-N1	

GENERAL NOTES / REFERENCE DOCUMENTS

GENERAL NOTES:

1. FOR ALL LOAD PLEASE REFER ELECTRICAL LOAD LIST & BALANCE (CCS MODE 'IMPORT') (123A90-DDL-EL-LIS-20016).
2. LVI1 – TYPICAL FOR AC, DC UPS & DISTRIBUTION BOARD INCOMER [REFER 123A90-DDL-EL-DG-20163 ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS (Distribution Boards, AC UPS, DC UPS, etc)].
3. LVO2 – TYPICAL FOR DISTRIBUTION BOARD 1PH OUTGOING WITHOUT EARTH FAULT [REFER 123A90-DDL-EL-DG-20163 ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS (Distribution Boards, AC UPS, DC UPS, etc)].
4. LVO3 – TYPICAL FOR DISTRIBUTION BOARD LIGHTING OUTGOING FEEDER WITH PHOTO CELL [REFER 123A90-DDL-EL-DG-20163 ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS (Distribution Boards, AC UPS, DC UPS, etc)].
5. LVO4 – TYPICAL FOR DISTRIBUTION BOARD LIGHTING OUTGOING FEEDER WITH AMBIENT THERMOSTAT CELL [REFER 123A90-DDL-EL-DG-20163 ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS (Distribution Boards, AC UPS, DC UPS, etc)].
6. LVOE1 – TYPICAL FOR DISTRIBUTION BOARD 1PH OUTGOING WITH EARTH FAULT [REFER 123A90-DDL-EL-DG-20163 ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS (Distribution Boards, AC UPS, DC UPS, etc)].
7. CONTACTOR COMMANDED BY COMMON PHOTO CELL DEVICE.
8. DP-100N1, DP-200N2, DP-300N1 AND DP-400N1 OUTGOING FEEDERS HAS BEEN INCLUDED INSIDE EACH HVAC CONTAINER PANELS. △2

REFERENCE DOCUMENTS:

	DOC. NO.	DESCRIPTION
	123A90-DDL-EL-DG-20158	OVERALL / KEY SINGLE LINE DIAGRAM
	123A90-DDL-EL-DG-20165	ELECTRICAL SCHEDULES (DISTRIBUTION BOARDS)
	123A90-DDL-EL-DG-20016	ELECTRICAL LOAD LIST & BALANCE (CCS MODE 'IMPORT')
	123A90-DDL-EL-DG-20163	ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS(Distribution Boards, AC UPS, DC UPS, etc)
△2	123A90-DDL-EL-DG-20159	ELECTRICAL SINGLE LINE DIAGRAM LV SYSTEM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
SUMMARY / GENERAL NOTES / REFERENCE DOCUMENTS

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20162

SHEET 002

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 02

LEGEND

SYMBOL	DESCRIPTION
	MOULDED CASE CIRCUIT BREAKER (MCCB)
	CABLE GLAND
	MINIATURE CIRCUIT BREAKER (MCB)
	PHOTO CELL
	EARTH LEAKAGE RELAY
2P	TWO POLE
4P	FOUR POLE
	SURGE PROTECTION DEVICE
	RESIDUAL CURRENT CIRCUIT BREAKER AND OVER LOAD PROTECTION
	AMBIENT THERMOSTAT FOR HEAT TRACING
	CONTACTOR

LEGEND

SYMBOL	DESCRIPTION

LEGEND

SYMBOL	DESCRIPTION

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
LEGEND

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : NTS

A3

DRAWING NO. 123A90-DDL-EL-DG-20162

SHEET 003

REV. 02

File Name : 123A90-DDL-EL-DG-20162 Rev. 02

F.to UNI A3: 420mmx297mm

LV SWITCHBOARD(SG-200N1)
NORMAL FEEDER
(400V, 3PH+N+PE SUPPLY)

2 5G50 mm² 83043-CEL

LIGHTING & SMALL POWER DB BoP
DP-200N1

Q01 MCCB 63A 4P TYPE "C" LVI1

2 100A 4P

SPD01

2 TYPE 1-2 In=25 kA 8/20 µs AUX. CONTACT Uc=280 V c.a. (integrated fuse protection)

QS1

PE

400V,3PH+N,63A,25KA/1Sec.

Q02 MCB+RCD 16A 2P TYPE'C' LVO3	Q03 MCB+RCD 16A 2P TYPE'C' LVO3	Q04 MCB+RCD 16A 2P TYPE'C' LVO3	Q05 MCB+RCD 16A 2P TYPE'C' LVOE1	Q06 MCB+RCD 16A 2P TYPE'C' LVOE1	Q07 MCB 6A 2P TYPE'C' LVO2	Q08 MCB+RCD 16A 2P TYPE'D' LVO3A	Q09 MCB+RCD 16A 2P TYPE'D' LVO3A	Q10 MCB+RCD 16A 2P TYPE'D' LVO3A	Q11 MCB 6A 2P TYPE'C' LVO2	Q12 MCB 6A 2P TYPE'C' LVO2	Q13 MCB 50A 4P TYPE'C' LVO4	Q14 MCB+RCD 20A 2P TYPE'C' LVOE1	Q15 MCB+RCD 20A 2P TYPE'C' LVOE1	Q16 MCB+RCD 20A 2P TYPE'C' LVOE1	Q17 MCB+RCD 20A 2P TYPE'C' LVOE1	Q18 MCB+RCD 20A 2P TYPE'C' LVOE1	Q19 MCB+RCD 20A 2P TYPE'C' LVOE1	Q20 MCB+RCD 20A 2P TYPE'C' LVOE1	Q21 MCB+RCD 20A 2P TYPE'C' LVOE1
30mA	30mA	30mA	30mA	30mA		30mA	30mA	30mA				30mA	30mA	30mA	30mA	30mA	30mA	30mA	30mA
K1	K1 NOTE-7	K1 NOTE-7				K1 NOTE-7	K1 NOTE-7	K1 NOTE-7			K1 AT								
3G2.5 mm² P-EJB-200N1-02-L1-01	3G2.5 mm² P-EJB-200N1-03-L2-01	3G2.5 mm² P-EJB-200N1-04-L3-01	3G10 mm² P-ESO-200N1-05-L1-01	3G10 mm² P-ESO-200N1-06-L2-01		2 4G4mm²_E P-EJB-200N1-08-L1-04	4G4mm²_E P-EJB-200N1-09-L2-01	4G2.5mm²_E P-EJB-200N1-10-L3-01				3G6 mm² P-EJB-200N1-14-L1-01	3G6 mm² P-EJB-200N1-15-L2-01	3G6 mm² P-ETB-200N1-16-L3-01	3G6 mm² P-EJB-200N1-17-L1-01		3G6 mm² P-ETB-200N1-19-L3-01	3G6 mm² P-EJB-200N1-20-L1-01	
EJB-200N1-02-L1-01 NORMAL LIGHTING UPPER DECK-CIRCUIT NO. 1 - 1.5 kW	EJB-200N1-03-L2-01 NORMAL LIGHTING LOWER DECK-CIRCUIT NO. 1 - 1 kW	EJB-200N1-04-L3-01 NORMAL LIGHTING STAIRS 0.20 kW	ESO-200N1-05-L1-01 SMALL POWER SOCKET (UPPER DECK) 3 kW	ESO-200N1-06-L2-01 SMALL POWER SOCKET (LOWER DECK) 3 kW	2 SPARE 0.726 KW	2 EJB-200N1-08-L1-04 EMERGENCY LIGHTING UPPER DECK-CIRCUIT NO. 1-1.50 kW	EJB-200N1-09-L2-01 EMERGENCY LIGHTING LOWER DECK-CIRCUIT NO. 1-1.50 kW	EJB-200N1-10-L3-01 EMERGENCY LIGHTING STAIRS 0.30 kW	2 SPARE 0.25 KW	2 SPARE 0.25 KW		2 EJB-200N1-14-L1-01 TRACE HEATING-PROCESS LINES-FEEDER 1 - 3.50 kW	2 EJB-200N1-15-L2-01 TRACE HEATING-PROCESS LINE-FEEDER 2 - 3.50 kW	ETB-200N1-16-L3-01 TRACE HEATING-PROCESS LINES-FEEDER 3 - 3.50 kW	2 EJB-200N1-17-L1-01 TRACE HEATING-PROCESS LINES-FEEDER 4 - 3.50 kW	2 TRACE HEATING SPARE 3.50kW	2 ETB-200N1-19-L3-01 TRACE HEATING-PROCESS LINES-FEEDER 6 - 2.50 kW	2 EJB-200N1-20-L1-01 TRACE HEATING PROCESS LINES-FEEDER 7 - 2.50 kW	TRACE HEATING SPARE 3.50kW

CONTINUED TO SHEET 009

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
LIGHTING SMALL POWER DB BoP

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20162

SHEET 004

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20162 Rev. 02

CONTINUED FROM SHEET 008

LIGHTING & SMALL POWER DB BoP
DP–200N1

400V,3PH+N,63A,25KA/1Sec.

Q23 MCB 6A 2P TYPE'C' LVO2	Q24 MCB 6A 2P TYPE'C' LVO2	Q25 MCB 6A 2P TYPE'C' LVO2	Q26 MCB 6A 2P TYPE'C' LVO2	Q27 MCB 6A 2P TYPE'C' LVO2	Q28 MCB 6A 2P TYPE'C' LVO2	Q29 MCB 6A 2P TYPE'C' LVO2	Q30 MCB 6A 2P TYPE'C' LVO2	Q31 MCB 10A 4P TYPE'C' LVO2	Q32 MCB 6A 2P TYPE'C' LVO2	Q33 MCB 6A 2P TYPE'C' LVO2	Q34 MCB 6A 2P TYPE'C' LVO2	Q35 MCB 6A 2P TYPE'C' LVO2	Q36 MCB 6A 2P TYPE'C' LVO2	Q37 MCB 20A 2P TYPE'C' LVO2	Q38 MCB 10A 2P TYPE'C' LVO2	Q39 MCB 10A 2P TYPE'C' LVO2	Q40 MCB 6A 2P TYPE'C' LVO2
3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	5G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²	3G2.5 mm²
83104–CEL	83105–CEL	83106–CEL	83107–CEL	83108–CEL	83109–CEL	83110–CEL	83111–CEL	83112–CEL	83113–CEL	83114–CEL	83115–CEL	83116–CEL	83117–CEL	83118–CEL	83119–CEL	83120–CEL	83121–CEL
B400–SIS–001 SIS–CONTROLLER AND I/O CABINET–AUXILIARY – 0.5 kW	B400–PCS–001 PCS–CONTROLLER AND I/O CABINET–AUXILIARY – 0.5 kW	B400–EMCS–001 EMCS–CONTROLLER AND I/O CABINET–AUXILIARY – 0.5 kW	B400–FGS–001 FGS FIRE & GAS PANEL AUXILIARY – 0.8 kW (2)	B400–NET–001 SYSTEM SERVER/NETWORK CABINET–AUXILIARY – 0.5 KW	B400–SRV–001 SERVER CABINET ITER AUXILIARY – 0.5 KW	(2) CP–630E1 UCP–INSTRUMENT AIR PACKAGE A–63000 AUXILIARY–0.5 KW	(2) CP–640E1 UCP–N2 PACKAGE AUXILIARY – 0.5 KW	(2) CP–100E2 AUX. TRANSFORMER OLTC 1 KW	(2) CP–100E3 AUX. TRANSFORMER AVR 0.3 KW	(2) CP–100E4 AUX. TRANSFORMER 7MVA 0.5 KW	RR–100D1 AUXILIARY NER 0.3 KW	(2) CP–200E1 AUX. TRANSFORMER 1.6MVA 0.5KW	(2) CP–200E2 AUX. TRANSFORMER SOLAR 0.5MVA – 0.5KW	(2) CP–100E1 AUXILIARY GIS 3KW	SG–100D1 AUX. 6.6kV SWITCHBOARD 1KW	SG–200N1 AUX. LV SWITCHBOARD 1KW	SG–200D2 AUX. SOLAR SWGR 0.5KW

PE

CONTINUED TO SHEET 010

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
LIGHTING SMALL POWER DB BoP

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : 1:X

A3

DRAWING NO. 123A90–DDL–EL–DG–20162

SHEET 005

REV. 02

File Name : 123A90–DDL–EL–DG–20162 Rev. 02

F.to UNI A3: 420mmx297mm

CONTINUED FROM SHEET 009

LIGHTING & SMALL POWER DB BoP
DP–200N1

400V,3PH+N,63A,25KA/1Sec.

Q41 MCB 6A 2P TYPE'C' LVO2	Q42 MCB 6A 2P TYPE'C' LVO2	Q43 MCB 6A 2P TYPE'C' LVO2	Q44 MCB+RCD 16A 2P TYPE'C' LVO3	Q45 MCB+RCD 16A 2P TYPE'D' LVO3A	Q46 MCB 6A 2P TYPE'C' LVO2	Q47 MCB 10A 2P TYPE'C' LVO2	Q48 MCB 20A 2P TYPE'C' LVO2	Q49 MCB 20A 2P TYPE'C' LVO2	Q50 MCB 10A 2P TYPE'C' LVO2	Q51 MCB 10A 4P TYPE'C' LVO2	QT1 MCB 1A 2P TYPE'C' LVO2	
			30mA	30mA								
			K1 NOTE–7	K1 NOTE–7								
3G2.5 mm² 83122–CEL	3G2.5 mm² 83123–CEL	3G2.5 mm² 83124–CEL									3G4 mm² P–EPH–200N1–01	
UP–200F3 AC UPS PAS AUXILIARY 0.2KW	UP–200F4 AC UPS F&G AUXILIARY 0.2KW	UP–200F1 DC BATTERY SYSTEM AUXILIARY 0.2KW	NORMAL LIGHTING–SPARE 1kW	EMERGENCY LIGHTING SPARE 1.50kW	INS CABINET–AUX. SPARE 0.5kW	SPARE 1 KW	SPARE 3KW	SPARE 3KW	SPARE 1 KW	SPARE 3 KW	EPH–200N1–01 TWILIGHT SWITCH AND AUXILIARY	

PE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	06/11/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/04/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/02/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL SINGLE LINE DIAGRAMS (DISTRIBUTION BOARD BoP)
LIGHTING SMALL POWER DB BoP

CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK

SCALE : 1:X

A3

DRAWING NO. 123A90–DDL–EL–DG–20162

SHEET 006

REV. 02

File Name : 123A90–DDL–EL–DG–20162 Rev. 02

F.to UNI A3: 420mmx297mm