BASE LOAD POWER HUB (BLPH)

"SG-200N1" LV SWBD 400/230V

ELECTRICAL
SINGLE LINE DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231298/SD/11
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"
SINGLE LINE DIAGRAM
Cover

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00011

SHEET 001

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04

INDEX SHEETS

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9
001	Cover										
002	Index										
003	Graphical Symbols										
004	Graphical Symbols										
005	Single Line Drawing										
006	Single Line Drawing										
007	Single Line Drawing										
008	Single Line Drawing										
009	Single Line Drawing										
010	Single Line Drawing										
011	Single Line Drawing										
012	Single Line Drawing										
013	Single Line Drawing										

Sheet	Description	Revision 0	1	2	3	4	5	6	7	8	9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/11

Item n° : PF1002983/26

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Index

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

SCALE : NTS

A3

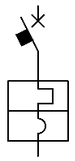
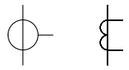
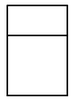
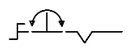
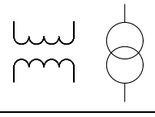
DRAWING NO. 1723002197-EL-DG-00011

SHEET 002

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04

GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION
	**CIRCUIT BREAKER WITH AUTOMATIC RELEASE**		**CAPACITOR (GENERAL SYMBOL)**		**BISTABLE RELAY**		**CHANGE-OVER BREAK BEFORE MAKE CONTACT**
	**CIRCUIT BREAKER WITH AUTOMATIC RELEASE AND BUILT-IN THERMOMAGNETIC RELEASE**		**CAPACITIVE VOLTAGE DIVIDER**		**COIL OF A MECHANICALLY LATCHED RELAY**		**DELAYED ACTION (IN THE DIRECTION OF MOVEMENT FROM THE ARC TOWARDS ITS CENTRE)**
			**CURRENT TRANSFORMER**		**INDICATOR, ELECTROMECHANICAL ELEMENT**		POSITION SWITCH (LIMIT SWITCH), MAKE CONTACT
	**SWITCH DISCONNECTOR**		RING CURRENT TRANSFORMER		**LAMP (GENERAL SYMBOL)**		**POSITION SWITCH (LIMIT SWITCH), MAKE CONTACT**
	**CONTACTOR**		**INDICATING INSTRUMENT GENERAL SYMBOL**		**SEMICONDUCTOR DIODE**		POSITION SWITCH (LIMIT SWITCH), BREAK CONTACT
	LOCK WITH FREE KEY WHEN THE DEVICE IS IN OPEN POSITION		**INTEGRATING INSTRUMENT (GENERAL SYMBOL)**		**LED**		**OPERATED BY TURNING**
	LOCK WITH FREE KEY WHEN THE DEVICE IS IN CLOSE POSITION		**DISCONNECTING FUSE, NOT WITH LIVE CIRCUIT AND WITH MECHANICAL LINKAGE (STRIKER FUSE))**		**TRANSDUCER OF ALTERNATING CURRENT MEASURE INTO DIRECT CURRENT SIGNAL**		**THREE HELD POSITIONS TURNING SWITCH**
	PLUG AND SOCKET (MALE AND FEMALE)		**OPERATING DEVICE (GENERAL SYMBOL)**		**EARTH, GROUND (GENERAL SYMBOL)**		**THREE POSITIONS TURNING SWITCH, WITH SPRING THROWBACK TO THE CENTRAL POSITION**
	**VOLTAGE TRANSFORMER WITH TWO WINDINGS**		**COIL OF A TIME DELAYED OPERATING RELAY**		**MAKE CONTACT**		MECHANICAL INTERLOCK BETWEEN TWO DEVICES
	**VOLTAGE TRANSFORMER WITH THREE WINDINGS**		**COIL OF A TIME DELAYED RELEASING RELAY**		**BREAK CONTACT**		

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

CROSSWIND

ROSETTI MARINO

IMESA ELECTRICAL ENGINEERING

DWG n° : 231298/SD/11

Item n° : PF1002983/26

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Graphical Symbols

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

SCALE : NTS

A3

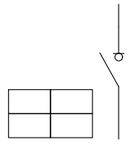
DRAWING NO. 1723002197-EL-DG-00011

SHEET 003

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04

GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION	GRAPHICAL SYMBOLS	DESCRIPTION
	RESISTOR (GENERAL SYMBOL)		AMPEROMETRIC TEST SOCKET				
	THERMISTOR (GENERAL SYMBOL)		3 PHASES LINE				
	HEATING ELEMENT		3 PHASES + NEUTRAL				
	INTERCONNECTION TERMINAL		SINGLE PHASE + NEUTRAL				
	WITHDRAWABLE TERMINAL SHORT-CIRCUITABLE ON C.T. SECONDARY CIRCUITS		CIRCUIT BREAKER SWITCH-DISCONNECTOR				
	WITHDRAWABLE TERMINAL FOR V.T. SECONDARY CIRCUITS						
	SWITCHBOARD TERMINAL	M	MOTOR FOR LOADING SPRINGS				
	ON - OFF SWITCH	YC	CLOSING COIL				
	SURGE ARRESTER	YO	OPENING COIL				
	VOLTMETRIC TEST SOCKET	YU	UNDERVOLTAGE COIL				

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231298/SD/11
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Graphical Symbols

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

SCALE : NTS

A3

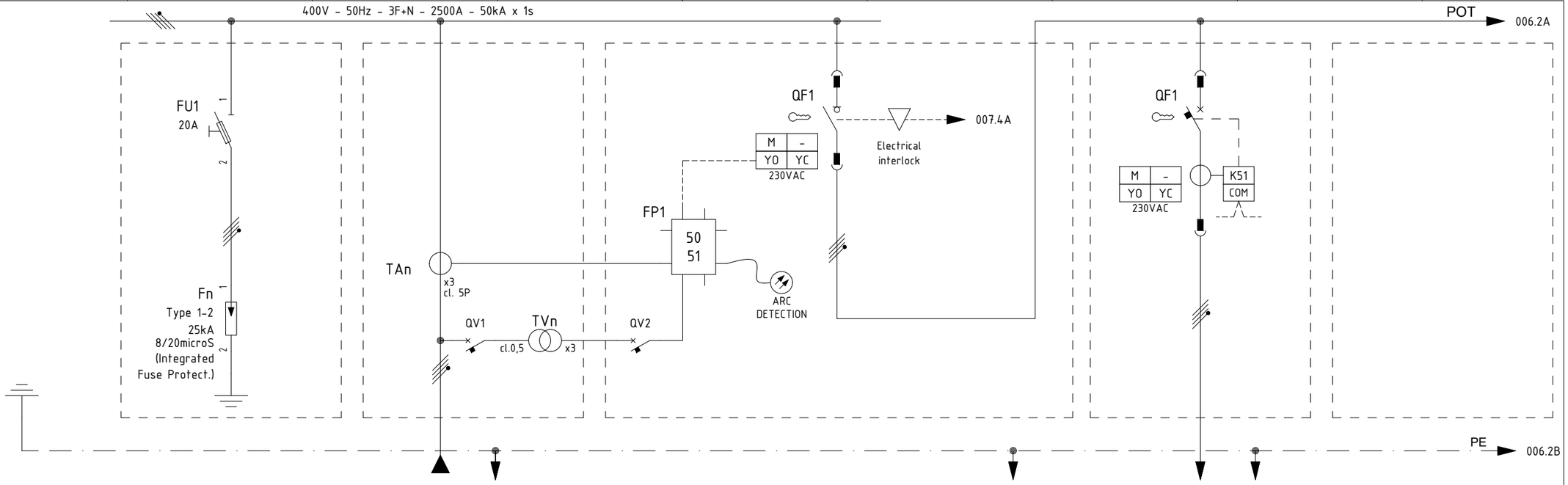
DRAWING NO. 1723002197-EL-DG-00011

SHEET 004

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	-	-	-	A-20000	
UTILITY			2	SURGE ARRESTER	-	INCOMING TRASFORMER	ELECTROLYSER AUXILIARY LOAD	
COLUMN/CUBICLE			3	-	A1 / +02	A1 / +05	A1 / +08	
RATED POWER | RATED CURRENT			4/5	- | -	- | -	- | -	293 kW | 497 A	
TYPICAL FUNCTIONAL			6	-	-	-	L3-630	
CIRCUIT BREAKER (ABB)	TYPE		7	-	-	E4.2N/MS-3200 4P	E1.2C-1250 4P	
	VERSION		8	-	-	WITHDRAWABLE	WITHDRAWABLE	
	TRIP UNITS		9	-	-	-	EKIP HI TOUCH LSIG = 630	
	Icu	KA	10	-	-	66 kA (1s)	50 kA	
OVERLOAD	L	Range A	11	-	-	-	(0.4 ÷ 1) x In	
		Range t	12	-	-	-	t=k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	-	-	-	(0.6 ÷ 10) x In [EXCLUDABLE]	
		Range t	14	-	-	-	t=k / t=k/I²	
INST. SHORT-CIRCUIT	I	Range A	15	-	-	-	(1.5 ÷ 15) x In	
		Range t	16	-	-	-	instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	-	-	-	(0.1 ÷ 1) x In (EXCLUDABLE)	
		Range t	18	-	-	-	t=k / t=k/I^2	
CONTACTOR (ABB)			19	-	-	-	-	
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-	
SURGE ARRESTER (DEHN)			21	DVCI 1 255 FM (961205)	-	-	-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-	
FUSE HOLDER (ITALWEBER)			23	Fuses 20A gG	-	-	-	
INDIRECT PROTECTION (ABB)			24	-	-	REF615-(version F) HBFFAEFCNDCABBA11G	-	
VOLTMETER			25	-	-	-	-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	TAR1052K5N01V_18 - 2500/1A	-	-	
	PERFORMANCE/CLASS		27	-	5VA / 5P20	-	-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	TTV020400VC1 - 400r3/110r3V	-	-	
	PERFORMANCE/CLASS		29	-	20VA / 0.5	-	-	
LOCK-OUT RELAY (-)			30	-	-	-	-	
POWER CONDUCTOR		mmq	31	-	-	-	1 x 150 + [4 x (1 x 300)]	

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231298/SD/11
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

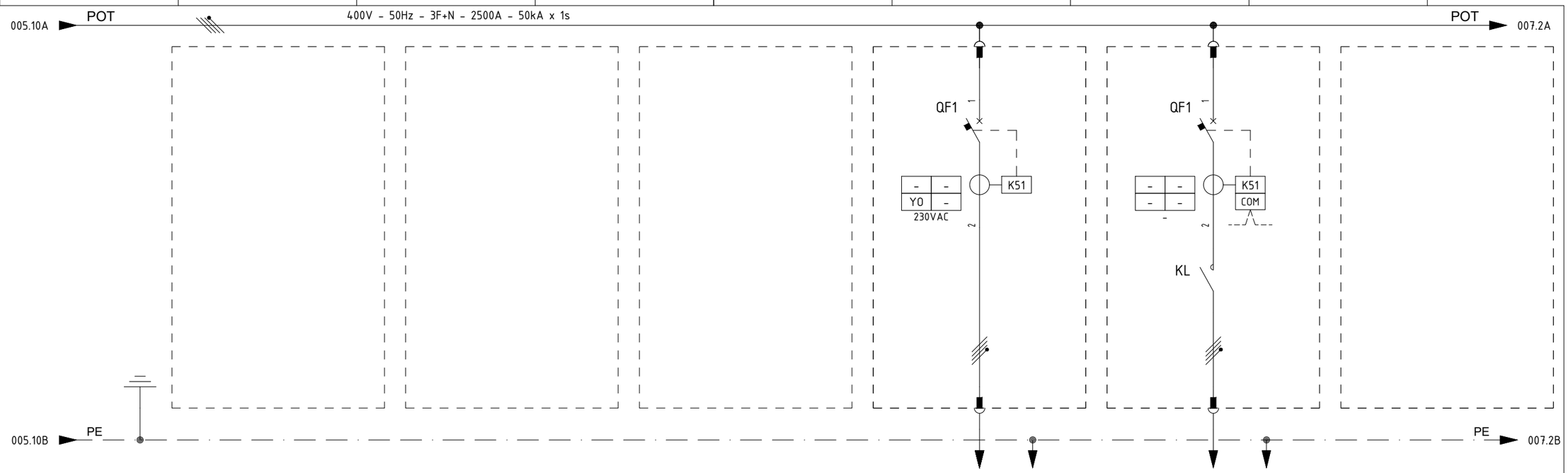
DRAWING NO. 1723002197-EL-DG-00011

SHEET 005

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1				-		UP-200F4		SPARE	
UTILITY			2				FUTURE		AC UPS F&G - 8 H UP-200F4 - BYPASS		SPARE	
COLUMN/CUBICLE			3				A2 / +03		A2 / +04		A2 / +05	
RATED POWER | RATED CURRENT			4/5				-	-	18 kW	28.9 A	- kW	- A
TYPICAL FUNCTIONAL			6						L1-63		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7						XT2S - 160		XT2S - 160	
	VERSION		8						4P - FIXED		4P - FIXED	
	TRIP UNITS		9						EKIP DIP LSIG (In = 63A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10						50 kA		50 kA	
OVERLOAD	L	Range A	11						(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12						k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13						(1 - 10) x In		(0.6 - 10) x In	
		Range t	14						0.05 - 0.4 sec / k/I^2		0.05 - 0,4 sec / k/I^2	
INST. SHORT-CIRCUIT	I	Range A	15						(1 - 10) x In		(1.5 - 10) x In	
		Range t	16						<= 0.02 sec		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17						(0.2 - 1) x In		(0.1 - 1) x In	
		Range t	18						0.1 - 0.8 sec		t=k / t=k/I^2	
CONTACTOR (ABB)			19						-		AF40-40-00-13 (70A-AC1); 100-250VAC/DC	
THERMAL OVERLOAD RELAY (ABB)			20						-		-	
SURGE ARRESTER (DEHN)			21						-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22						-		-	
FUSE HOLDER (ITALWEBER)			23						-		-	
INDIRECT PROTECTION (ABB)			24						-		-	
VOLTMETER			25						-		-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26						-		-	
	PERFORMANCE/CLASS		27						-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28						-		-	
	PERFORMANCE/CLASS		29						-		-	
LOCK-OUT RELAY (-)			30						-		-	
POWER CONDUCTOR		mmq	31						4G35		5G4	

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

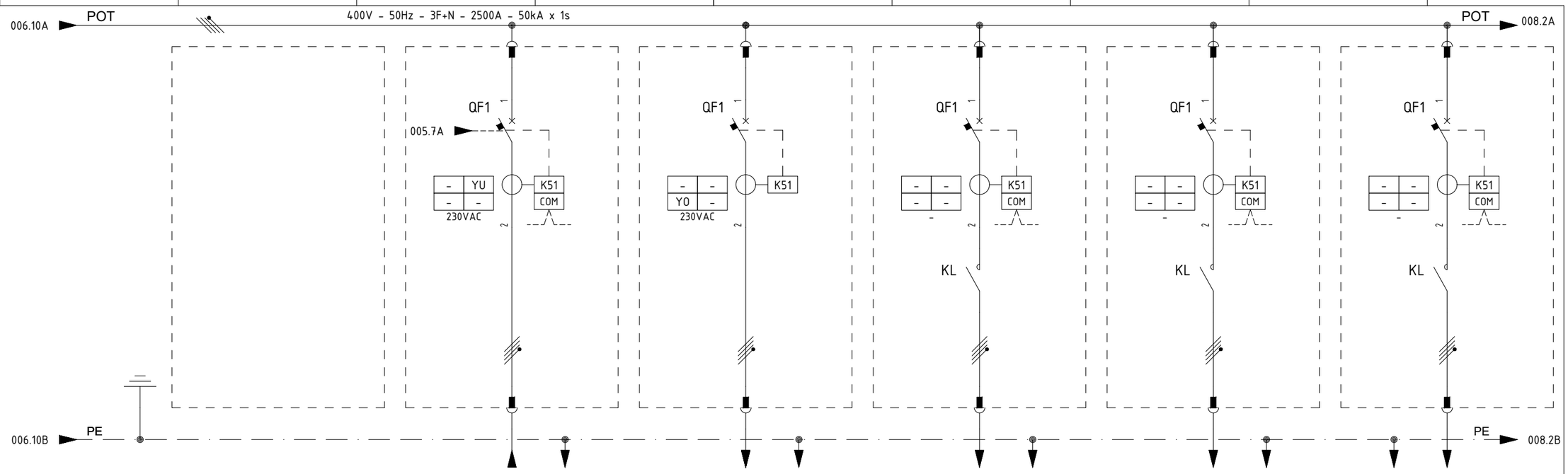
DRAWING NO. 1723002197-EL-DG-00011

SHEET 006

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM				JB-200E2	UP-200F3	SPARE	DP-200N1	JB-200E3
UTILITY			2	TEMPORARY GENERATOR / MOBILE BATTERY PACK	AC UPS PAS - 30 MIN UP-200F3 - LINE A	SPARE	DB - LIGHTING & SMALL POWER - BoP	CRANE
COLUMN/CUBICLE			3	A2 / +08	A3 / +01	A3 / +02	A3 / +03	A3 / +04
RATED POWER | RATED CURRENT			4/5	138 kW | 210 A	36.0 kW | 57.8 A	- kW | - A	15.35 kW | 23.7 A	25 kW | 37.8 A
TYPICAL FUNCTIONAL			6	LE2-320	L1-100	LK1-40	LK1-100	LK1-63
CIRCUIT BREAKER (ABB)	TYPE		7	XT5S - 400	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 320A)	EKIP DIP LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 63A)
	Icu KA		10	50 kA	50 kA	50 kA	50 kA	50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	(1 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In	(1 - 10) x In	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In
		Range t	16	instantaneous	<= 0.02 sec	instantaneous	instantaneous	instantaneous
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In	(0.2 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In
		Range t	18	t=k / t=k/I^2	0.1 - 0.8 sec	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2
CONTACTOR (ABB)			19	-	-	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF80-40-00-13 (70A-AC1); 100-250VAC/DC	AF52-40-00-13 (100A-AC1); 100-250VAC/DC
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-	-
SURGE ARRESTER (DEHN)			21	-	-	-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-	-
FUSE HOLDER (ITALWEBER)			23	-	-	-	-	-
INDIRECT PROTECTION (ABB)			24	-	-	-	-	-
VOLTMETER			25	-	-	-	-	-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-	-
	PERFORMANCE/CLASS		27	-	-	-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-	-
	PERFORMANCE/CLASS		29	-	-	-	-	-
LOCK-OUT RELAY (-)			30	-	-	-	-	-
POWER CONDUCTOR mmq			31	5 x (1 x 95)	4G35	-	5G50	5G16

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

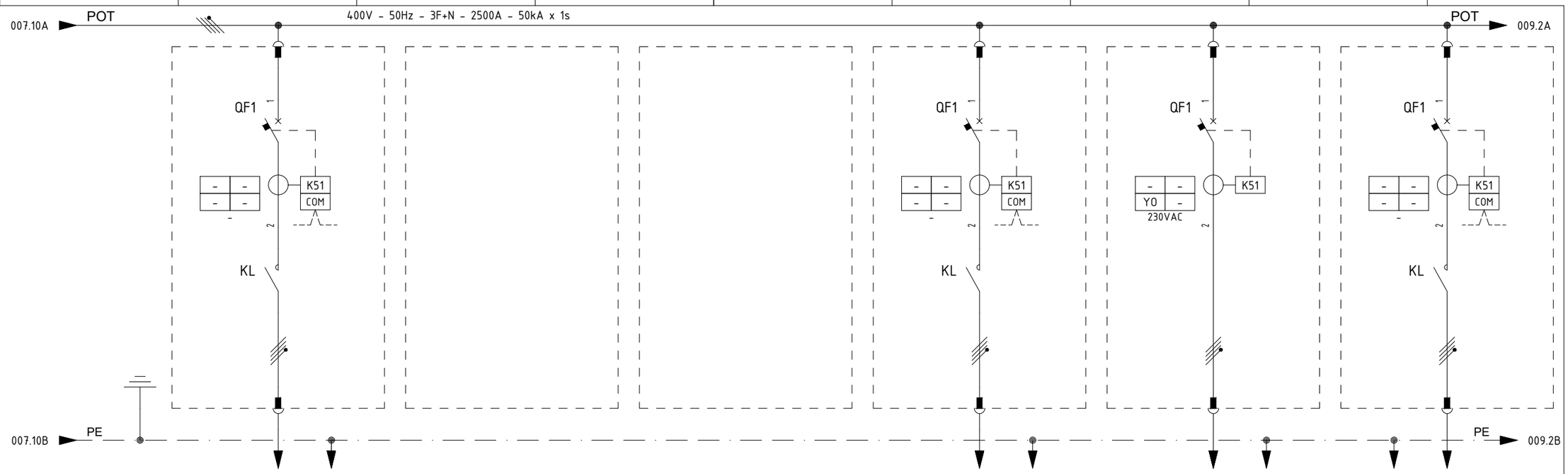
Single Line Drawing

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

A3 | DRAWING NO. 1723002197-EL-DG-00011 | SHEET 007 | REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	SPARE		-			JB-500E8		UP-200F3		B100-HSB-001	
UTILITY			2	SPARE		FUTURE			WATER PACKAGE		AC UPS PAS - 30 MIN UP-200F3 - LINE B		HVAC PANELS HV ROOM	
COLUMN/CUBICLE			3	A3 / +05		A3 / +06			A3 / +08		A4 / +01		A4 / +02	
RATED POWER | RATED CURRENT			4/5	- kW	- A	-	-		67 kW	107.00 A	36.0 kW	57.8 A	18 kW	34.1 A
TYPICAL FUNCTIONAL			6	LK1-40					LK2-160		L1-100		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160					XT4S - 250		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED					4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 40A)					EKIP HI TOUCH LSIG (In = 160A)		EKIP DIP LSIG (In = 100A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA					50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In					(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2					k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In					(0.6 - 10) x In		(1 - 10) x In		(0.6 - 10) x In	
		Range t	14	0.05 - 0,4 sec / k/I^2					0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2		0.05 - 0,4 sec / k/I^2	
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In					(1.5 - 15) x In		(1 - 10) x In		(1.5 - 15) x In	
		Range t	16	instantaneous					instantaneous		<= 0.02 sec		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In					(0.1 - 1) x In		(0.2 - 1) x In		(0.1 - 1) x In	
		Range t	18	t=k / t=k/I^2					t=k / t=k/I^2		0.1 - 0.8 sec		t=k / t=k/I^2	
CONTACTOR (ABB)			19	AF40-40-00-13 (70A-AC1); 100-250VAC/DC					AF190-40-11-13 (275A-AC1); 100-250 VAC/DC		-		AF40-40-00-13 (70A-AC1); 100-250VAC/DC	
THERMAL OVERLOAD RELAY (ABB)			20	-					-		-		-	
SURGE ARRESTER (DEHN)			21	-					-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-					-		-		-	
FUSE HOLDER (ITALWEBER)			23	-					-		-		-	
INDIRECT PROTECTION (ABB)			24	-					-		-		-	
VOLTMETER			25	-					-		-		-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-					-		-		-	
	PERFORMANCE/CLASS		27	-					-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-					-		-		-	
	PERFORMANCE/CLASS		29	-					-		-		-	
LOCK-OUT RELAY (-)			30	-					-		-		-	
POWER CONDUCTOR		mmq	31	-					5G70		4G35		5G16	

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231298/SD/11
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

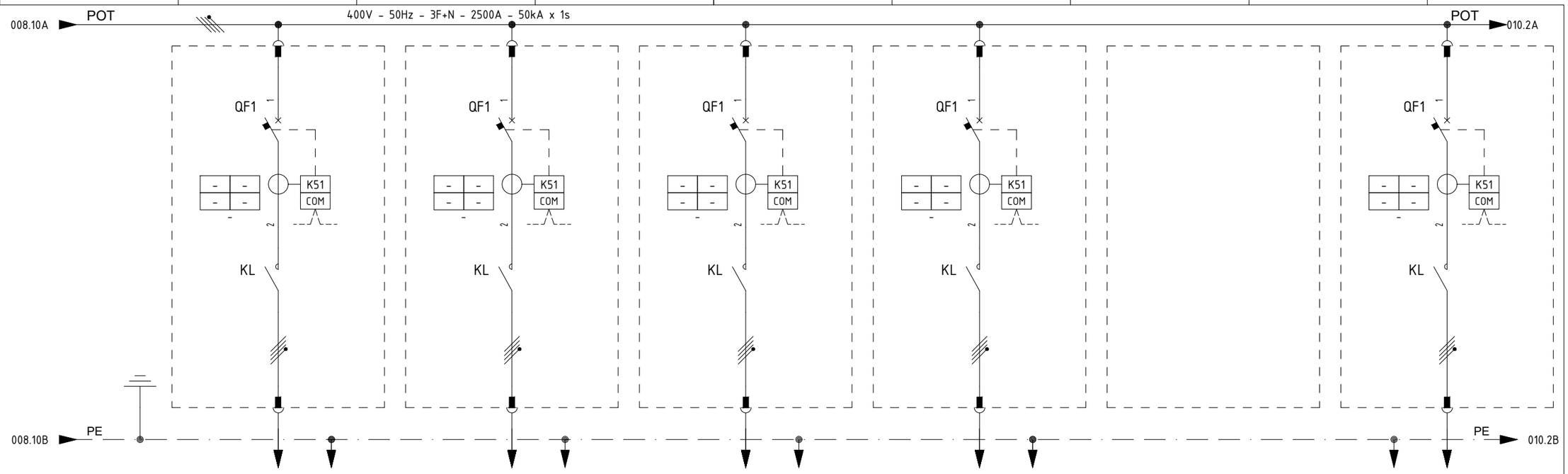
DRAWING NO. 1723002197-EL-DG-00011

SHEET 008

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	A-80000	CP-850F03	SPARE	SPARE		K-63001-A
UTILITY			2	FUEL CELL AUXILIARY LOAD	BESS PCS CABINET	SPARE	SPARE		INSTRUMENTS AIR PACKAGE 01A
COLUMN/CUBICLE			3	A4 / +03	A4 / +04	A4 / +05	A4 / +06		A4 / +08
RATED POWER | RATED CURRENT			4/5	20 kW | 32.84 A	11,09 kW | 17.42 A	- kW | - A	- kW | - A		68.75 kW | 111.24 A
TYPICAL FUNCTIONAL			6	LK1-63	LK1-40	LK1-40	LK1-40		LK2-160
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160		XT4S - 250
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED		4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 63A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 160A)
	Icu	KA	10	50 kA	50 kA	50 kA	50 kA		50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2		k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In		(0.6 - 10) x In
		Range t	14	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2		0.05 - 0.4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In		(1.5 - 15) x In
		Range t	16	instantaneous	instantaneous	instantaneous	instantaneous		instantaneous
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In		(0.1 - 1) x In
		Range t	18	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2		t=k / t=k/I^2
CONTACTOR (ABB)			19	AF52-40-00-13 (100A-AC1); 100-250VAC/DC	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF190-40-11-13 (275A-AC1); 100-250 VAC/DC
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-		-
SURGE ARRESTER (DEHN)			21	-	-	-	-		-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-		-
FUSE HOLDER (ITALWEBER)			23	-	-	-	-		-
INDIRECT PROTECTION (ABB)			24	-	-	-	-		-
VOLTMETER			25	-	-	-	-		-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-		-
	PERFORMANCE/CLASS		27	-	-	-	-		-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-		-
	PERFORMANCE/CLASS		29	-	-	-	-		-
LOCK-OUT RELAY (-)			30	-	-	-	-		-
POWER CONDUCTOR		mmq	31	5G16	4 x 10	-	-		5G70

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

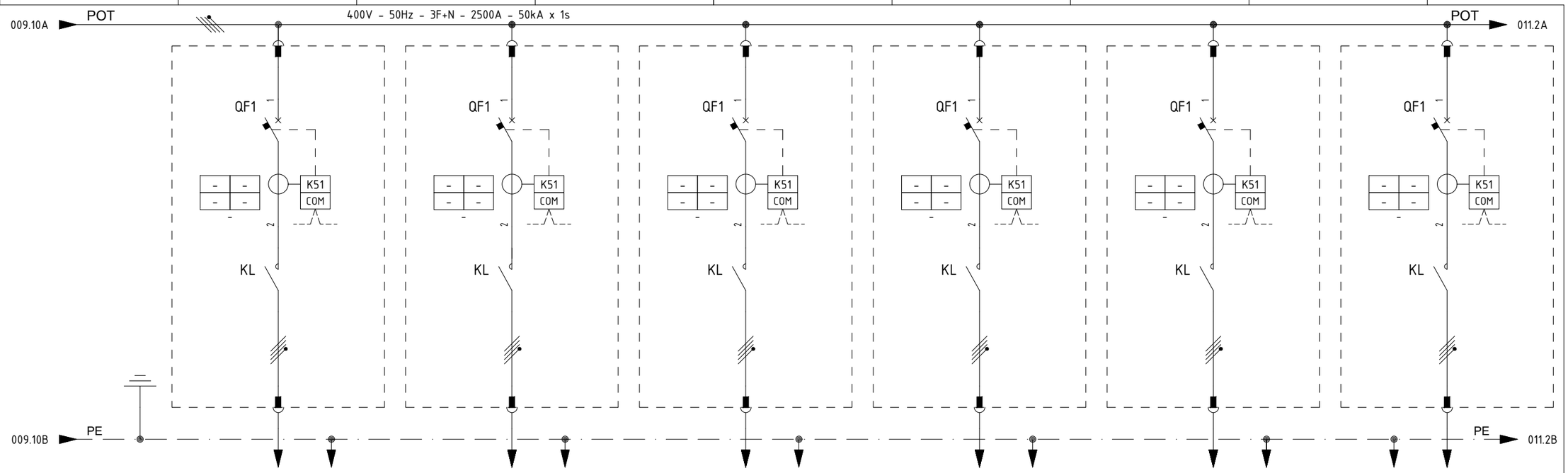
DRAWING NO. 1723002197-EL-DG-00011

SHEET 009

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	SPARE		B200-HSB-001		B300-HSB-001		B400-HSB-001		CN-200N1		SPARE	
UTILITY			2	SPARE		HVAC PANELS - LV ROOM		HVAC PANELS - UPS ROOM		HVAC PANELS - ITER		IMPRESSED CURR. CATHODIC PROTECTION (ICCP) SYSTEM		SPARE	
COLUMN/CUBICLE			3	A5 / +01		A5 / +02		A5 / +03		A5 / +04		A5 / +05		A5 / +06	
RATED POWER | RATED CURRENT			4/5	15 kW	24.0 A	18 kW	34.1 A	35,75 kW	61 A	35,75 kW	61 A	14 kVA	23.8 A	- kW	- A
TYPICAL FUNCTIONAL			6	LK1-40		LK1-40		LK1-63		LK1-63		LK1-40		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 63A)		EKIP HI TOUCH LSIG (In = 63A)		EKIP HI TOUCH LSIG (In = 40A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA		50 kA		50 kA		50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2		k/I^2		k/I^2		k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In		(0.6 - 10) x In	
		Range t	14	0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2		0.05 - 0,4 sec / k/I^2	
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In		(1.5 - 15) x In	
		Range t	16	instantaneous		instantaneous		instantaneous		instantaneous		instantaneous		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In		(0.1 - 1) x In	
		Range t	18	t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2		t=k / t=k/I^2	
CONTACTOR (ABB)			19	AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF52-40-00-13 (100A-AC1); 100-250VAC/DC		AF52-40-00-13 (100A-AC1); 100-250VAC/DC		AF40-40-00-13 (70A-AC1); 100-250VAC/DC		AF40-40-00-13 (70A-AC1); 100-250VAC/DC	
THERMAL OVERLOAD RELAY (ABB)			20	-		-		-		-		-		-	
SURGE ARRESTER (DEHN)			21	-		-		-		-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-		-		-		-		-		-	
FUSE HOLDER (ITALWEBER)			23	-		-		-		-		-		-	
INDIRECT PROTECTION (ABB)			24	-		-		-		-		-		-	
VOLTMETER			25	-		-		-		-		-		-	
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-		-		-		-		-		-	
	PERFORMANCE/CLASS		27	-		-		-		-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-		-		-		-		-		-	
	PERFORMANCE/CLASS		29	-		-		-		-		-		-	
LOCK-OUT RELAY (-)			30	-		-		-		-		-		-	
POWER CONDUCTOR		mmq	31	-		5G16		5G16		5G16		5G16		-	

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

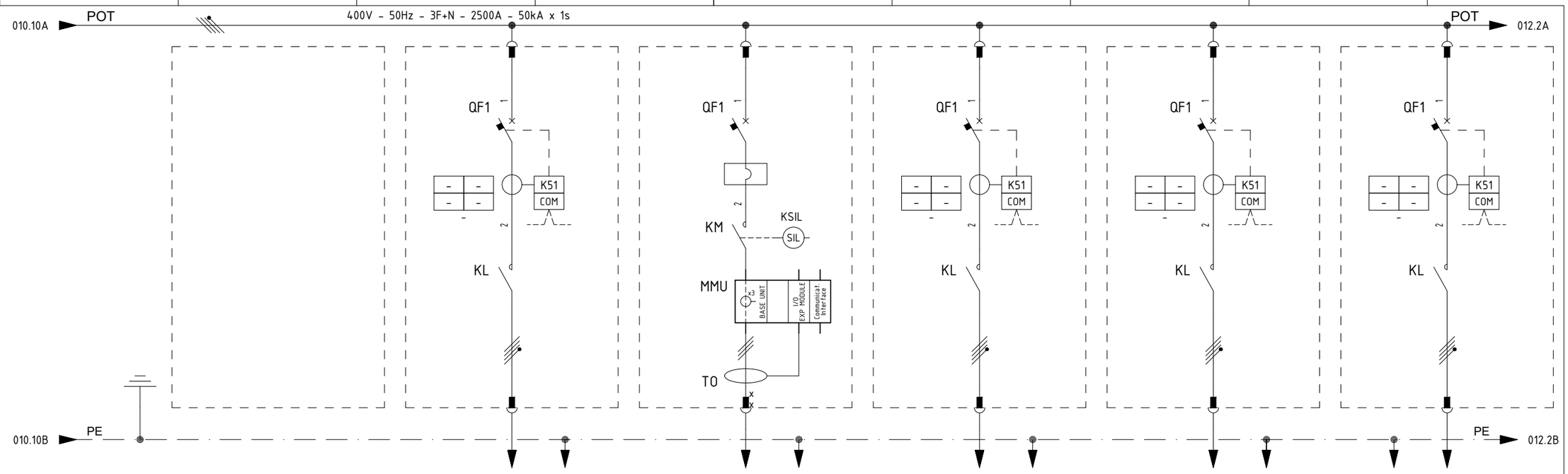
DRAWING NO. 1723002197-EL-DG-00011

SHEET 010

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM				K-63001-B	PM-50001 B	CP-850E1	CP-850E2	-
UTILITY			2	INSTRUMENTS AIR PACKAGE 01B	SEA WATER PUMP B	BESS LV1 CABINET (+DISTR 1)	BESS LV2 CABINET (+DISTR 2)	SPARE
COLUMN/CUBICLE			3	A5 / +08	A6 / +01	A6 / +02	A6 / +03	A6 / +04
RATED POWER | RATED CURRENT			4/5	68.75 kW | 111.24 A	6.1 kW | 11.0 A	11.28 kW | 18.09 A	11.28 kW | 18.09 A	- kW | - A
TYPICAL FUNCTIONAL			6	LK2-160	M1-6	LK1-40	LK1-40	LK1-40
CIRCUIT BREAKER (ABB)	TYPE		7	XT4S - 250	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	3P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 160A)	MA (In = 20A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 40A)
	Icu	KA	10	50 kA	-	50 kA	50 kA	50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	-	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In
		Range t	12	k/I^2	-	k/I^2	k/I^2	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	-	(0.6 - 10) x In	(0.6 - 10) x In	(0.6 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	-	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2	0.05 - 0,4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In	(6 - 14) x I	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In
		Range t	16	instantaneous	<= 0.02 sec	instantaneous	instantaneous	instantaneous
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In	-	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In
		Range t	18	t=k / t=k/I^2	-	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2
CONTACTOR (ABB)			19	AF190-40-11-13 (275A-AC1); 100-250 VAC/DC	AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF40-40-00-13 (70A-AC1); 100-250VAC/DC
THERMAL OVERLOAD RELAY (ABB)			20	-	UMC100.3 UC (0.24 - 63A)	-	-	-
SURGE ARRESTER (DEHN)			21	-	-	-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-	-
FUSE HOLDER (ITALWEBER)			23	-	-	-	-	-
INDIRECT PROTECTION (ABB)			24	-	-	-	-	-
VOLTMETER			25	-	-	-	-	-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-	-
	PERFORMANCE/CLASS		27	-	-	-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-	-
	PERFORMANCE/CLASS		29	-	-	-	-	-
LOCK-OUT RELAY (-)			30	-	-	-	-	-
POWER CONDUCTOR		mmq	31	5G70	4G4	4 x (1 x 10)	4 x (1 x 10)	-

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

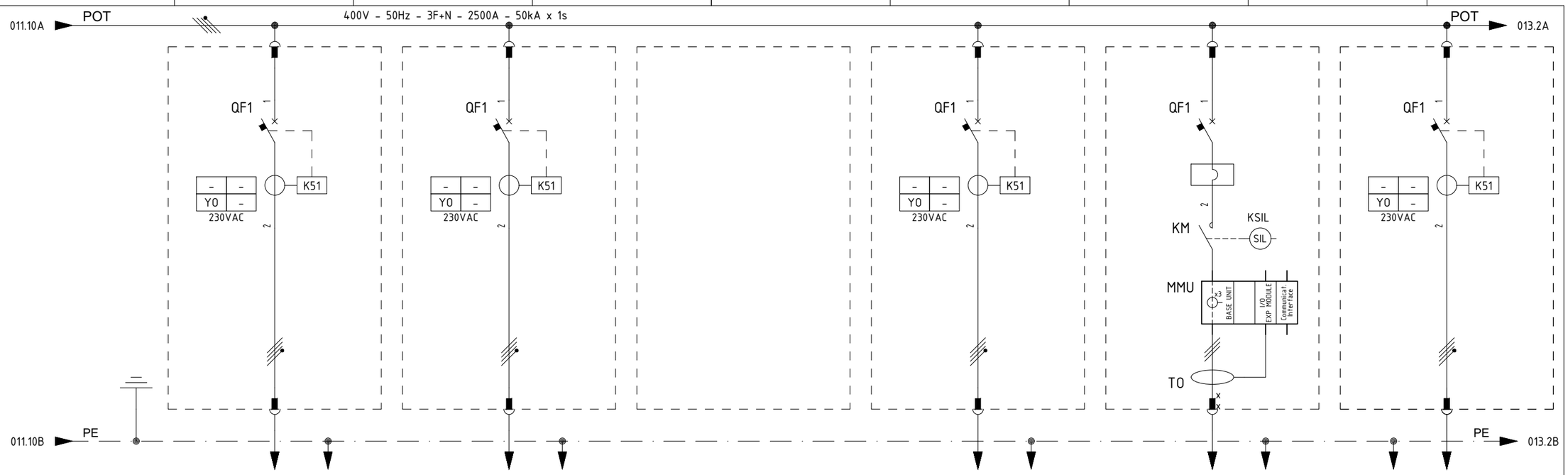
DRAWING NO. 1723002197-EL-DG-00011

SHEET 011

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	UP-200F4	UP-200F4		ESW-200N1	PM-50001 A	UP-200F3
UTILITY			2	AC UPS F&G - 8 H UP-200F4 - LINE A	AC UPS F&G - 8h UP-200F4 - LINE B		WELDING SOCKETS (TOP DECK)	SEA WATER PUMP A	AC UPS PAS - 30 min. UP-200F3 - BYPASS
COLUMN/CUBICLE			3	A6 / +05	A6 / +06		A6 / +08	A7 / +01	A7 / +02
RATED POWER | RATED CURRENT			4/5	18 kW | 28.9 A	18 kW | 28.9 A		69.84 kW | 126.15 A	6.1 kW | 11.0 A	36 kW | 57.8 A
TYPICAL FUNCTIONAL			6	L1-63	L1-63		L2-160	M1-6	L1-100
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160	XT2S - 160		XT4S - 250	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	4P - FIXED		4P - FIXED	3P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP DIP LSIG (In = 63A)	EKIP DIP LSIG (In = 63A)		EKIP DIP LSIG (In = 160A)	MA (In = 20A)	EKIP DIP LSIG (In = 100A)
	Icu	KA	10	50 kA	50kA		50kA	-	50 kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In	-	(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2		k/I^2	-	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In	-	(1 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2	-	0.05 - 0.4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In	(6 - 14) x I	(1 - 10) x In
		Range t	16	<= 0.02 sec	<= 0.02 sec		<= 0.02 sec	<= 0.02 sec	<= 0.02 sec
EARTH FAULT PROTECTION	G	Range A	17	(0.2 - 1) x In	(0.2 - 1) x In		(0.2 - 1) x In	-	(0.2 - 1) x In
		Range t	18	0.1 - 0.8 sec	0.1 - 0.8 sec		0.1 - 0.8 sec	-	0.1 - 0.8 sec
CONTACTOR (ABB)			19	-	-		-	AF38-30-00-13 (18.5 kW - AC3) - 100-250Vac/dc	-
THERMAL OVERLOAD RELAY (ABB)			20	-	-		-	UMC100.3 UC (0.24 - 63A)	-
SURGE ARRESTER (DEHN)			21	-	-		-	-	-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-		-	-	-
FUSE HOLDER (ITALWEBER)			23	-	-		-	-	-
INDIRECT PROTECTION (ABB)			24	-	-		-	-	-
VOLTMETER			25	-	-		-	-	-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-		-	-	-
	PERFORMANCE/CLASS		27	-	-		-	-	-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-		-	-	-
	PERFORMANCE/CLASS		29	-	-		-	-	-
LOCK-OUT RELAY (-)			30	-	-		-	-	-
POWER CONDUCTOR		mmq	31	4G35	4G35		5G50	4G4	4G35

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

CROSSWIND

IMESA ELECTRICAL ENGINEERING

ROSETTI MARINO

DWG n° : 231298/SD/11

Item n° : PF1002983/26

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

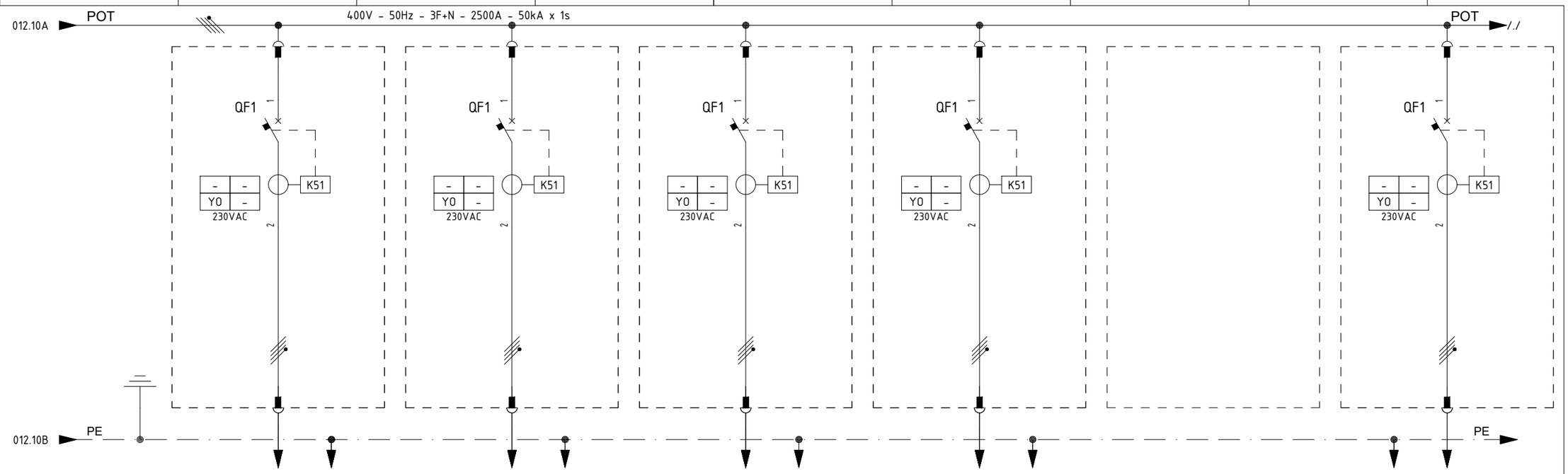
DRAWING NO. 1723002197-EL-DG-00011

SHEET 012

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04



ITEM			1	UP-200F1	UP-200F1	UP-200F2	UP-200F2		ESW-200N2
UTILITY			2	DC BATTERY SYSTEM SWTG CONTROL - FEEDER A	DC BATTERY SYSTEM SWTG CONTROL - FEEDER B	NAVAID SYSTEM FEEDER A	NAVAID SYSTEM FEEDER B		WELDING SOCKETS (LOWER DECK)
COLUMN/CUBICLE			3	A7 / +03	A7 / +04	A7 / +05	A7 / +06		A7 / +08
RATED POWER | RATED CURRENT			4/5	10 kW | 16 A	10 kW | 16 A	1.6 kVA | 7 A	1.6 kVA | 7 A		69.84 kW | 126.15 A
TYPICAL FUNCTIONAL			6	L1-63	L1-63	L1-63	L1-63		L2-160
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160		XT4S - 250
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED		4P - FIXED
	TRIP UNITS		9	EKIP DIP LSIG (In = 63A)	EKIP DIP LSIG (In = 63A)	EKIP DIP LSIG (In = 63A)	EKIP DIP LSIG (In = 63A)		EKIP DIP LSIG (In = 160A)
	Icu	KA	10	50kA	50kA	50kA	50kA		50kA
OVERLOAD	L	Range A	11	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In	(0.4 - 1) x In		(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2		k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(1 - 10) x In	(1 - 10) x In	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In
		Range t	14	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2	0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1 - 10) x In	(1 - 10) x In	(1 - 10) x In	(1 - 10) x In		(1 - 10) x In
		Range t	16	<= 0.02 sec	<= 0.02 sec	<= 0.02 sec	<= 0.02 sec		<= 0.02 sec
EARTH FAULT PROTECTION	G	Range A	17	(0.2 - 1) x In	(0.2 - 1) x In	(0.2 - 1) x In	(0.2 - 1) x In		(0.2 - 1) x In
		Range t	18	0.1 - 0.8 sec	0.1 - 0.8 sec	0.1 - 0.8 sec	0.1 - 0.8 sec		0.1 - 0.8 sec
CONTACTOR (ABB)			19	-	-	-	-		-
THERMAL OVERLOAD RELAY (ABB)			20	-	-	-	-		-
SURGE ARRESTER (DEHN)			21	-	-	-	-		-
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-	-	-	-		-
FUSE HOLDER (ITALWEBER)			23	-	-	-	-		-
INDIRECT PROTECTION (ABB)			24	-	-	-	-		-
VOLTMETER			25	-	-	-	-		-
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-	-	-	-		-
	PERFORMANCE/CLASS		27	-	-	-	-		-
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-	-	-	-		-
	PERFORMANCE/CLASS		29	-	-	-	-		-
LOCK-OUT RELAY (-)			30	-	-	-	-		-
POWER CONDUCTOR		mmq	31	4G16	4G16	3G16	3G16		5G50

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
=					
+					
4	28/08/2024	Santinelli	Flamminio	Sigismondi	As Built (ASB)
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

DWG n° : 231298/SD/11
Item n° : PF1002983/26

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00011

SHEET 013

REV. 04

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 04