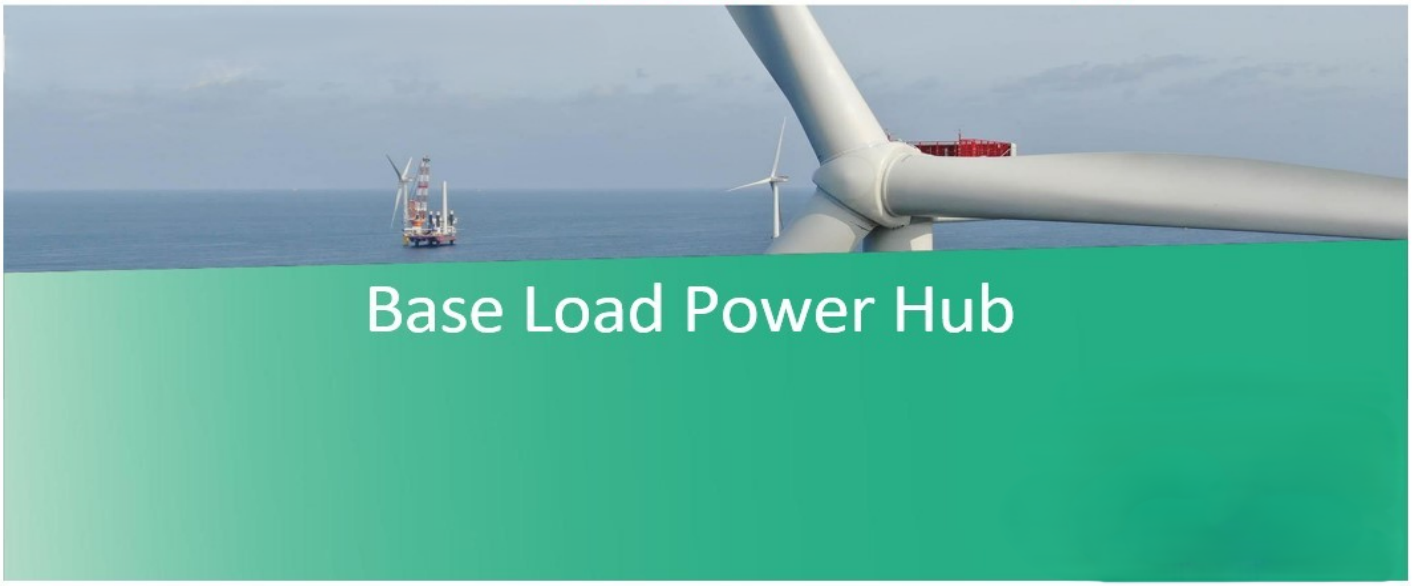
CROSSWIND

ROSETTI MARINO

PROVERLIS

PROJECT **123A90 - HOLLANDSE KUST NOORD WIND PARK**
BLPH Project



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	82 Main Power Distribution Medium Voltage 6.6 kV
SUBSYSTEM	82-99 MV 6.6 kV Temporary Yard Supply Integrated Test

CROSSWIND	123A90 - HOLLANDSE KUST NOORD WIND PARK BLPH Project MECHANICAL COMPLETION DOSSIER INDEX	ROSETTI MARINO

Sub System N°:	82-99	Tick as appropriate	ONSHORE	O
Description:	MV 6.6 kV Temporary Yard Supply Integrated Test		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	O
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	NA
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	NA
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	NA
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	NA
13.	***MECHANICAL COMPLETION CHANGES / MARK-UPS*** *A copy of the changes initiated during the Mechanical Completion process pertaining to the relevant Sub-System will be incorporated in this section*	NA

Note: Under the generic terminology “Building” are also covered the following disciplines: **Structural, Painting**

Under the generic terminology “Instrumental” is also covered the following discipline: **Fire & Gas**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	1		Issued on:	2024-12-03	
System:	82	/	Main Power Distribution Medium Voltage 6.6 kV		
SubSystem:	82-99	/	MV 6.6 kV Temporary Yard Supply Integrated Test		

1	COMPANY has, at its option and if required, reviewed the mechanical completion associated with the above-named system/sub-system of the SCOPE and observed that such functional sub-system has been brought into readiness for commencement of the associated pre-commissioning and commissioning activities, but for the outstanding punch list items, if any, attached and referred in this Certificate.
2	Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.
3	Mechanical Completion Status Index attached (per Discipline) Punch List report attached (Outstanding and Cleared)

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A '0	B '0

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2024-12-04	2024-12-04	2024-12-04	2024-12-04
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-04T14:20:09.794Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-04T15:29:45.952Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-04T16:07:38.018Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-04T16:07:44.097Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 82-99 & process: MC

Electrical	82-99 MV 6.6 kV Temporary Yard Supply Integrated Test						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
GEN-TEMP	Temporary Generator	ONSHORE	C10004765	CZX01E	100	2024-12-03	RFC 1
JB100-TEMP	Temporary JB	ONSHORE	C10004771	CPX31	100	2024-12-03	RFC 1
P-JB100-TEMP	LV cable GEN-TEMP/JB100-TEMP	ONSHORE	C10004776	CPX10	100	2024-12-03	RFC 1
P-MV-1-TEMP	MV Cable	ONSHORE	C10004768	CPX08	100	2024-12-03	RFC 1
P-MV-2-TEMP	MV Cable	ONSHORE	C10004769	CPX08	100	2024-12-03	RFC 1
P-MV-3-TEMP	MV Cable	ONSHORE	C10004770	CPX08	100	2024-12-03	RFC 1
P-PB100-1-TEMP	LV cable JB100-TEMP/PB100-1-TEMP	ONSHORE	C10004774	CPX10	100	2024-12-03	RFC 1
P-PB100-2-TEMP	LV cable JB100-TEMP/PB100-2-TEMP	ONSHORE	C10004775	CPX10	100	2024-12-03	-
PB100-1-TEMP	Emergency push button internal B100	ONSHORE	C10004772	CPX00	100	2024-12-03	RFC 1
PB100-2-TEMP	Emergency push button external B100	ONSHORE	C10004773	CPX00	100	2024-12-03	RFC 1
PE-1-TEMP	Earthing connection	ONSHORE	C10004766	CPX09	100	2024-12-03	RFC 1
PE-2-TEMP	Earthing connection	ONSHORE	C10004767	CPX09	100	2024-12-03	RFC 1

Project CROSSWIND

PUNCH LIST REPORT

NO DATA AVAILABLE

Section 2 CONSOLIDATED PUNCH LISTS

Project CROSSWIND

PUNCH LIST REPORT

NO DATA AVAILABLE

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

SHT.No 1 | REV. B04

DRG.NO. 240571_SLD_001

CUSTOMER 15kV SUB-STATION POC

LOAD CABLE TO CUSTOMER POC 3x1Cx95mm²x140m 15KV

CLIENT

AGGREKO

3x1Cx35mm²x25m 12/20kV

CUSTOMER 6.6kV SUB-STATION POC

LOAD CABLE FROM CUSTOMER POC 3x1Cx240mm²x65m 6.6KV

3x1Cx240mm²x15m 6.6kV

3x1Cx240mm²x25m 6.6kV

4P+2N+1E, 1x240mm²x25m H07RN-F

4P+2N+1E, 1x240mm²x15m H07RN-F

4P+1E, 1x240mm² H07RN-F

1 x 1C x 240mm² H07RN-F

1 x 1C x 16mm² H07RN-F to CABLE TRAY

1 x 1C x 50mm² H07RN-F to FUEL TANK

1 x 1C x 16mm² H07RN-F to FENCE

Point of Earth Connection by Client

1x240mm² link TX3

1x240mm² link TX1

1x240mm² link DG

PHASE A

ABB SAFEPLUS C | ABB SAFEPLUS V | ABB SAFEPLUS V | ABB SAFEPLUS C

ACB INTERTRIP & ESD

TX 1 3.15MVA 5%z/0 12/35kV TAPPING 0.0%

3.15MVA 15kV OPERATION 0.472kV OPERATION 50Hz

AGGREKO TRANSFORMER 1

TX.1 3.15MVA 5%z/0 6350V TAPPING 0.0%

TX.2 3.15MVA 5%z/0 6350V TAPPING 0.0%

6.3MVA 6.6kV OPERATION 0.472kV OPERATION 50Hz

AGGREKO TRANSFORMER 2

DG

2500A 4P MCCB AUTO

1250kVA 421V 50Hz

AGGREKO GENSET 1

AGGREKO GENSET 2

AGGREKO GENSET 3

AGGREKO GENSET 4

LB1

LOAD BANK

1500kW Resistive Only

DO NOT SCALE - IF IN DOUBT - ASK

THIRD ANGLE PROJECTION

UNLESS OTHERWISE STATED, FABRICATION TOLERANCES TO BE:

< 500mm	± 1mm
> 500mm<1500mm	± 2mm
> 1500mm	± 3mm
0.0	± 0.5mm
Angular	± 1°

WEIGHT: est. _____ kg. _____ lb.
act. _____ kg. _____ lb.

REPORT ALL ERRORS TO NoEur MAJOR PROJECTS TEAM.
NOTE:- ALL BUILD MODIFICATIONS & CHANGES TO BE NOTIFIED TO NoEur TECHNICAL SUPPORT.
UNLESS OTHERWISE STATED, ALL DIMENSIONS IN MILLIMETERS.
ALL ERRORS TO BE MARKED ON DRAWING IN RED INK.

REVISIONS	CHKD.
A : OUTLINE DESIGN	
B : DETAILED DESIGN	
C : FOR CONSTRUCTION	
D : AS BUILT	

NOTES:

PART No.

WORK TO AGGREKO STANDARDS :-

A.S.1. :-	DATUMS & DIMENSIONING.
A.S.2. :-	I.D.OF BOUGHT IN FABRICATIONS.
A.S.3. :-	PAINTING & COATING.
A.S.4. :-	WELDING.
A.S.5. :-	CONTROL PANEL WIRING.
A.S.6. :-	PRESSURE TESTING.
A.S.7. :-	MATERIAL SPEC. & GRADE.
A.S.8. :-	SILENCER SPECIFICATION.
A.S.9. :-	ELECTROPLATING SPECIFICATION.

NOTE:- THIS DRAWING IS THE PROPERTY OF AGGREKO AND MUST NOT BE REPRODUCED OR COPIED WITHOUT PRIOR WRITTEN CONSENT OF AGGREKO

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Email: majorprojectenquiriesNE@aggreko.biz
www.aggreko.com

TITLE

Crosswind - Italy

4MW - 6.6kV - 50Hz

Single Line Drawing

DRAWN BY: P. García	DATE: 06/11/2024	JOB NO.	
CHECKED BY: M. Fitzgerald	DATE: 06/11/2024	CUSTOMER REF./P.O.	
APPROVED BY:	DATE:	SCALE NTS	SIZE A3
DRG.NO. 240571_SLD_001	SHEET No. 1	No. OF SHT'S 1	REV. B04

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 82-99 & process: MC & discipline : E

Electrical	82-99 MV 6.6 kV Temporary Yard Supply Integrated Test						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
GEN-TEMP	Temporary Generator	ONSHORE	C10004765	CZX01E	100	2024-12-03	RFC 1
JB100-TEMP	Temporary JB	ONSHORE	C10004771	CPX31	100	2024-12-03	RFC 1
P-JB100-TEMP	LV cable GEN-TEMP/JB100-TEMP	ONSHORE	C10004776	CPX10	100	2024-12-03	RFC 1
P-MV-1-TEMP	MV Cable	ONSHORE	C10004768	CPX08	100	2025-04-15	RFC 1
P-MV-2-TEMP	MV Cable	ONSHORE	C10004769	CPX08	100	2025-04-15	RFC 1
P-MV-3-TEMP	MV Cable	ONSHORE	C10004770	CPX08	100	2025-04-15	RFC 1
P-PB100-1-TEMP	LV cable JB100-TEMP/PB100-1-TEMP	ONSHORE	C10004774	CPX10	100	2024-12-03	RFC 1
P-PB100-2-TEMP	LV cable JB100-TEMP/PB100-2-TEMP	ONSHORE	C10004775	CPX10	100	2024-12-03	-
PB100-1-TEMP	Emergency push button internal B100	ONSHORE	C10004772	CPX00	100	2024-12-03	RFC 1
PB100-2-TEMP	Emergency push button external B100	ONSHORE	C10004773	CPX00	100	2024-12-03	RFC 1
PE-1-TEMP	Earthing connection	ONSHORE	C10004766	CPX09	100	2024-12-03	RFC 1
PE-2-TEMP	Earthing connection	ONSHORE	C10004767	CPX09	100	2024-12-03	RFC 1

ITEM	Tag	GEN-TEMP	: Temporary Generator			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004765		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CZX01E Package - E

1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	OK
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	OK
4	Check that all equipment has been earthed and bonded.	OK
5	Check if accessibility and maintenance are possible and safe.	OK
6	Verify that all vendor punch list created during FAT are uploaded in the Database.	NA
7	Check identification tag plate.	OK
8	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:31:24.969Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:00:34.153Z	

ITEM	Tag	PE-1-TEMP	: Earthing connection			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004766		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	PE-1-TEMP	: Earthing connection			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004766		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,5	
6		PH 2	N/A	
7		PH 3	N/A	
8	ARMOUR CONTINUITY Ω		N/A	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		N/A	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:31:39.507Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:57:35.631Z	

ITEM	Tag	PE-2-TEMP	: Earthing connection			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004767		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	PE-2-TEMP	: Earthing connection			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004767		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

CONTINUITY				
5	CORE CONTINUITY Ω	PH 1	0,4	
6		PH 2	N/A	
7		PH 3	N/A	
8	ARMOUR CONTINUITY Ω		N/A	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		N/A	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>999	
11		PH2 / PH1-PH3-A-E	>999	
12		PH3 / PH1-PH2-A-E	>999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T17:12:09.933Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:57:50.721Z	

ITEM	Tag	P-MV-1-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004768		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

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ITEM	Tag	P-MV-1-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004768		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:	11,5	kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :	121	µA	OK
8	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	µA	
9	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	µA	

2nd INSULATION TEST

	Voltage applied:	500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque	N.m	Note

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note HV TEST: See attached certificate and Test Report.
Note : Tightening torque will be done by the commissioning activity.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-04-15	2025-04-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-04-15T07:07:14.521Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-15T10:42:30.016Z	

Base Load Power Hub (BLPH)

Work Instruction – VLF Testing of Installed 6/10 kV Cables

Document Number: 123A90-PML-QHSE-WI-0001

Document Class: 2

0	01/04/2025	Issue for Review	R.Degli Esposti	G. Tassinari	A.Iveson
Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
0	Issue for Review (IFR)

HOLDS LIST

No.	Description
1	
2	
3	
4	

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3 Equipment Required 4

4 Safety Precautions 4

5 Procedure 4

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

1 SCOPE

This work instruction describes the procedure for Very Low Frequency (VLF) withstand testing on installed 6/10 (12) kV cables in accordance with IEC 60502-2:2014, clause 20.3.1(c).

2 APPLICABLE STANDARDS

- IEC 60502-2:2014 – Power cables with extruded insulation from 6 kV to 30 kV

3 EQUIPMENT REQUIRED

- VLF test set capable of generating 18 kV RMS at 0.1 Hz
- Voltage and current monitoring equipment
- Grounding and discharge rods
- Insulation resistance tester (Megger)
- Safety barriers and warning signs

4 SAFETY PRECAUTIONS

- All personnel must be trained and authorized
- Area must be barricaded with proper warning signs
- Only test personnel shall remain inside the zone during testing
- Confirm absence of voltage and ensure cable is grounded before and after testing
- Issue of work permit

5 PROCEDURE

5.1 TEST VOLTAGE

With reference to the IEC 60502-2:2014, clause 20.3.1(c), according to the Engineering department's instruction, the VLF test voltage is based on the system operational voltage of 6.6 kV.

Therefore, the value of U_0 is derived as:

$U_0 = 6.6\ kV / \sqrt{3} \approx 3.81\ kV$

Following this interpretation, the VLF withstand test shall be performed using:

- Test Voltage: $3 \times U_0 = 3 \times 3.81 \approx 11.43$ kV RMS
- Frequency: 0.1 Hz
- Duration: 15 minutes

5.2 VISUALLY INSPECT THE CABLE AND TERMINATIONS.

Inspect the entire length of the cable, joints, and terminations for visible damage, proper preparation, cleanliness, and conformance with installation standards. Check that no mechanical stress, sharp bends, or contamination is present.

5.3 VERIFY CABLE IS PROPERLY IDENTIFIED AND TAGGED.

Confirm that the cable is correctly labeled according to project documentation. Identification tags should match drawing references and be securely attached.

5.4 PERFORM INSULATION RESISTANCE MEASUREMENT.

Use a calibrated insulation resistance tester (Megger) at 500V for 1 minute to measure the resistance between conductor(s) and earth. Record values and ensure they meet project or manufacturer's criteria prior to proceeding with VLF test.

5.5 PREPARE TERMINATIONS, ENSURING CLEANLINESS AND DRYNESS.

Remove any temporary protection, clean the terminations with approved cleaning agents, and ensure the surfaces are dry and free of debris or moisture. Verify correct assembly of stress control components.

5.6 CONNECT VLF TEST SET BETWEEN CONDUCTOR AND METALLIC SCREEN (EARTH).

Connect the high-voltage output of the VLF generator to the conductor under test. Connect the return path to the metallic screen or grounding system. Ensure all connections are secure and that the test equipment is rated for the test voltage.

5.7 APPLY 11.43 KV RMSAT 0.1 HZ FOR 15 MINUTES.

Gradually ramp up the voltage 11.43 kV RMS. Maintain the voltage for the full duration of 15 minutes while monitoring the test equipment for current, voltage stability, and signs of insulation failure.

5.8 MONITOR FOR BREAKDOWNS, DISCHARGES OR CURRENT SPIKES.

Visually observe the test set and cable terminations. Monitor the current for any sharp increases or instability, which may indicate partial discharges or breakdowns.

5.9 DISCHARGE AND GROUND CABLE AFTER TEST COMPLETION.

After the test, slowly decrease the voltage to zero. Use a grounding rod to safely discharge any residual voltage from the conductor before handling.

5.10 REPEAT POINT 5.4

5.11 DOCUMENT ALL RESULTS IN THE ATTACHED TEST REPORT.

Complete the test report form, including all pre-checks, insulation readings, test parameters, observations, and results. Sign and submit the document for recordkeeping.

TEST REPORT

Cable Tag/ID: _____

Cable Type: _____

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☐ Cable properly tagged and identified

☐ Visual inspection of terminations completed

☐ Insulation resistance test performed

☐ Clean and dry termination surfaces

☐ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☐

5.13 TEST DETAILS

Megger before test: ☐

Test Method: VLF – 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☐

Equipment Used: _____

Serial Number: _____

Operator: _____

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☐

Breakdown occurred: Yes ☐/ No ☐

Final Result: PASS ☐/ FAIL ☐

NOTES: _____

_____

5.15 SIGNATURES

Tested by: _____ Signature: _____ Date: _____

Witnessed by: _____ Signature: _____ Date: _____

P-MV-1-TEMP
VLF Withstand Report
P-MV-1-TEMP Maintenance Test
Auto Test
Test finished successfully

Report Information

Date	4/14/2025 14:08 PM
Company Name	ICS
Region	---
Station	---
Operator Name	RECHICHI
Work Order	---

Device Under Test (Cable XLPE)

Voltage Rating	11.5 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	A
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Test Purpose	Maintenance
Arc Management Mode	Trip out on Arc

#	Test Voltage	Waveform	Frequency	Duration
1	11.5 kV•	Sine	0.1 Hz (A)	15 min

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	11.5 kV•	121 µA•	16.7 nF	17 GΩ	0.1 Hz

•RMS value

TEST REPORT

Cable Tag/ID: P-MV-1-TEMP

Cable Type: 1 X 240 mm²

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☑ Cable properly tagged and identified

☑ Visual inspection of terminations completed

☑ Insulation resistance test performed

☑ Clean and dry termination surfaces

☑ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☑

5.13 TEST DETAILS

Megger before test: ☑

Test Method: VLF - 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☑

Equipment Used: HVA 45

Serial Number: GH.5219.16.C010

Operator: FAUSTO RECHICHI

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☑

Breakdown occurred: Yes ☐/ No ☑

Final Result: PASS ☑/ FAIL ☐

NOTES: _____

5.15 SIGNATURES

Tested by: FAUSTO RECHICHI Signature: _____ Date: 14/04/2025

Witnessed by: GIOVANNI TANGIANU Signature: _____ Date: 14/04/2025

ITEM	Tag	P-MV-1-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004768		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From	To	

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

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ITEM	Tag	P-MV-1-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004768		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	2500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:		kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :		µA	Note
8	Ph2 / Ph1-Ph3-screen-armour-Earth:		µA	Note
9	Ph3 / Ph2-Ph1-screen-armour-Earth:		µA	Note

2nd INSULATION TEST

	Voltage applied:	2500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque		N.m

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note :See attached certificate.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:32:22.040Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:48:23.603Z	

GENERATOR L1
VLF Withstand Report

Manual Test
Test finished successfully

Report Information

Date	11/30/2024 9:47 AM
Company Name	ICS
Region	---
Station	---
Operator Name	RIELA
Work Order	MT-MISURE

Device Under Test (Cable XLPE)

Voltage Rating	10.0 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	A
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Arc Management Mode Trip out on Arc

#	first Voltage	Waveform	Frequency	Duration
1	10.1 kV•	Sine	0.1 Hz	5 min

Manual max. Voltage 10.1 kV

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	10.1 kV•	137 µA•	21.3 nF	451 MΩ	0.1 Hz

•RMS value

ITEM	Tag	P-MV-2-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004769		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-MV-2-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004769		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:	1,5	kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :	121	µA	OK
8	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	µA	
9	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	µA	

2nd INSULATION TEST

	Voltage applied:	500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque	N.m	Note

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note HV TEST: See attached certificate and Test Report.
Note : Tightening torque will be done by the commissioning activity.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-04-15	2025-04-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-04-15T07:07:30.034Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-15T10:43:58.823Z	

Base Load Power Hub (BLPH)

Work Instruction – VLF Testing of Installed 6/10 kV Cables

Document Number: 123A90-PML-QHSE-WI-0001

Document Class: 2

0	01/04/2025	Issue for Review	R.Degli Esposti	G. Tassinari	A.Iveson
Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
0	Issue for Review (IFR)

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1 SCOPE

This work instruction describes the procedure for Very Low Frequency (VLF) withstand testing on installed 6/10 (12) kV cables in accordance with IEC 60502-2:2014, clause 20.3.1(c).

2 APPLICABLE STANDARDS

- IEC 60502-2:2014 – Power cables with extruded insulation from 6 kV to 30 kV

3 EQUIPMENT REQUIRED

- VLF test set capable of generating 18 kV RMS at 0.1 Hz
- Voltage and current monitoring equipment
- Grounding and discharge rods
- Insulation resistance tester (Megger)
- Safety barriers and warning signs

4 SAFETY PRECAUTIONS

- All personnel must be trained and authorized
- Area must be barricaded with proper warning signs
- Only test personnel shall remain inside the zone during testing
- Confirm absence of voltage and ensure cable is grounded before and after testing
- Issue of work permit

5 PROCEDURE

5.1 TEST VOLTAGE

With reference to the IEC 60502-2:2014, clause 20.3.1(c), according to the Engineering department's instruction, the VLF test voltage is based on the system operational voltage of 6.6 kV.

Therefore, the value of U_0 is derived as:

$U_0 = 6.6\ kV / \sqrt{3} \approx 3.81\ kV$

Following this interpretation, the VLF withstand test shall be performed using:

- Test Voltage: $3 \times U_0 = 3 \times 3.81 \approx 11.43$ kV RMS
- Frequency: 0.1 Hz
- Duration: 15 minutes

5.2 VISUALLY INSPECT THE CABLE AND TERMINATIONS.

Inspect the entire length of the cable, joints, and terminations for visible damage, proper preparation, cleanliness, and conformance with installation standards. Check that no mechanical stress, sharp bends, or contamination is present.

5.3 VERIFY CABLE IS PROPERLY IDENTIFIED AND TAGGED.

Confirm that the cable is correctly labeled according to project documentation. Identification tags should match drawing references and be securely attached.

5.4 PERFORM INSULATION RESISTANCE MEASUREMENT.

Use a calibrated insulation resistance tester (Megger) at 500V for 1 minute to measure the resistance between conductor(s) and earth. Record values and ensure they meet project or manufacturer's criteria prior to proceeding with VLF test.

5.5 PREPARE TERMINATIONS, ENSURING CLEANLINESS AND DRYNESS.

Remove any temporary protection, clean the terminations with approved cleaning agents, and ensure the surfaces are dry and free of debris or moisture. Verify correct assembly of stress control components.

5.6 CONNECT VLF TEST SET BETWEEN CONDUCTOR AND METALLIC SCREEN (EARTH).

Connect the high-voltage output of the VLF generator to the conductor under test. Connect the return path to the metallic screen or grounding system. Ensure all connections are secure and that the test equipment is rated for the test voltage.

5.7 APPLY 11.43 KV RMSAT 0.1 HZ FOR 15 MINUTES.

Gradually ramp up the voltage 11.43 kV RMS. Maintain the voltage for the full duration of 15 minutes while monitoring the test equipment for current, voltage stability, and signs of insulation failure.

5.8 MONITOR FOR BREAKDOWNS, DISCHARGES OR CURRENT SPIKES.

Visually observe the test set and cable terminations. Monitor the current for any sharp increases or instability, which may indicate partial discharges or breakdowns.

5.9 DISCHARGE AND GROUND CABLE AFTER TEST COMPLETION.

After the test, slowly decrease the voltage to zero. Use a grounding rod to safely discharge any residual voltage from the conductor before handling.

5.10 REPEAT POINT 5.4

5.11 DOCUMENT ALL RESULTS IN THE ATTACHED TEST REPORT.

Complete the test report form, including all pre-checks, insulation readings, test parameters, observations, and results. Sign and submit the document for recordkeeping.

TEST REPORT

Cable Tag/ID: _____

Cable Type: _____

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☐ Cable properly tagged and identified

☐ Visual inspection of terminations completed

☐ Insulation resistance test performed

☐ Clean and dry termination surfaces

☐ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☐

5.13 TEST DETAILS

Megger before test: ☐

Test Method: VLF – 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☐

Equipment Used: _____

Serial Number: _____

Operator: _____

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☐

Breakdown occurred: Yes ☐/ No ☐

Final Result: PASS ☐/ FAIL ☐

NOTES: _____

_____

5.15 SIGNATURES

Tested by: _____ Signature: _____ Date: _____

Witnessed by: _____ Signature: _____ Date: _____

P-MV-2-TEMP
VLF Withstand Report
P-MV-2-TEMP - Maintenance Test
Auto Test
Test finished successfully

Report Information

Date	4/14/2025 14:28 PM
Company Name	ICS
Region	---
Station	---
Operator Name	RECHICHI
Work Order	---

Device Under Test (Cable XLPE)

Voltage Rating	11.5 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	B
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Test Purpose	Maintenance
Arc Management Mode	Trip out on Arc

#	Test Voltage	Waveform	Frequency	Duration
1	11.5 kV•	Sine	0.1 Hz (A)	15 min

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	11.5 kV•	121 µA•	16.7 nF	18 GΩ	0.1 Hz

•RMS value

TEST REPORT

Cable Tag/ID: P-MV-2-TEMP

Cable Type: 1X240 mm²

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☑ Cable properly tagged and identified

☑ Visual inspection of terminations completed

☑ Insulation resistance test performed

☑ Clean and dry termination surfaces

☑ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☑

5.13 TEST DETAILS

Megger before test: ☑

Test Method: VLF - 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☑

Equipment Used: HVA 45

Serial Number: GH 5219.16 C 010

Operator: FAUSTO RECHICHI

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☑

Breakdown occurred: Yes ☐/ No ☑

Final Result: PASS ☑/ FAIL ☐

NOTES: _____

5.15 SIGNATURES

Tested by: FAUSTO RECHICHI Signature: _____ Date: 14/04/2025

Witnessed by: GIOVANNI TONGIONN Signature: _____ Date: 14/04/2025.

ITEM	Tag	P-MV-2-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004769		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From	To	

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

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ITEM	Tag	P-MV-2-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004769		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	2500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:		kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :		µA	Note
8	Ph2 / Ph1-Ph3-screen-armour-Earth:		µA	Note
9	Ph3 / Ph2-Ph1-screen-armour-Earth:		µA	Note

2nd INSULATION TEST

	Voltage applied:	2500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque		N.m

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note :See attached certificate.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:36:06.186Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:47:39.134Z	

GENERATOR L2
VLF Withstand Report

Manual Test
Test finished successfully

Report Information

Date	11/30/2024 10:11 AM
Company Name	ICS
Region	---
Station	---
Operator Name	RIELA
Work Order	MT-MISURE

Device Under Test (Cable XLPE)

Voltage Rating	10.0 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	B
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Arc Management Mode Trip out on Arc

#	first Voltage	Waveform	Frequency	Duration
1	10.0 kV•	Sine	0.1 Hz	5 min

Manual max. Voltage 10.0 kV

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	10.0 kV•	138 µA•	21.8 nF	663 MΩ	0.1 Hz

•RMS value

ITEM	Tag	P-MV-3-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004770		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From	To	

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-MV-3-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004770		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:	1,5	kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :	122	µA	OK
8	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	µA	
9	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	µA	

2nd INSULATION TEST

	Voltage applied:	500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque	N.m	Note

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note HV TEST: See attached certificate and Test Report.
Note : Tightening torque will be done by the commissioning activity.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-04-15	2025-04-15	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-04-15T07:07:44.299Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-15T10:45:00.626Z	

Base Load Power Hub (BLPH)

Work Instruction – VLF Testing of Installed 6/10 kV Cables

Document Number: 123A90-PML-QHSE-WI-0001

Document Class: 2

0	01/04/2025	Issue for Review	R.Degli Esposti	G. Tassinari	A.Iveson
Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
0	Issue for Review (IFR)

HOLDS LIST

No.	Description
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1 SCOPE

This work instruction describes the procedure for Very Low Frequency (VLF) withstand testing on installed 6/10 (12) kV cables in accordance with IEC 60502-2:2014, clause 20.3.1(c).

2 APPLICABLE STANDARDS

- IEC 60502-2:2014 – Power cables with extruded insulation from 6 kV to 30 kV

3 EQUIPMENT REQUIRED

- VLF test set capable of generating 18 kV RMS at 0.1 Hz
- Voltage and current monitoring equipment
- Grounding and discharge rods
- Insulation resistance tester (Megger)
- Safety barriers and warning signs

4 SAFETY PRECAUTIONS

- All personnel must be trained and authorized
- Area must be barricaded with proper warning signs
- Only test personnel shall remain inside the zone during testing
- Confirm absence of voltage and ensure cable is grounded before and after testing
- Issue of work permit

5 PROCEDURE

5.1 TEST VOLTAGE

With reference to the IEC 60502-2:2014, clause 20.3.1(c), according to the Engineering department's instruction, the VLF test voltage is based on the system operational voltage of 6.6 kV.

Therefore, the value of U_0 is derived as:

$U_0 = 6.6\ kV / \sqrt{3} \approx 3.81\ kV$

Following this interpretation, the VLF withstand test shall be performed using:

- Test Voltage: $3 \times U_0 = 3 \times 3.81 \approx 11.43$ kV RMS
- Frequency: 0.1 Hz
- Duration: 15 minutes

5.2 VISUALLY INSPECT THE CABLE AND TERMINATIONS.

Inspect the entire length of the cable, joints, and terminations for visible damage, proper preparation, cleanliness, and conformance with installation standards. Check that no mechanical stress, sharp bends, or contamination is present.

5.3 VERIFY CABLE IS PROPERLY IDENTIFIED AND TAGGED.

Confirm that the cable is correctly labeled according to project documentation. Identification tags should match drawing references and be securely attached.

5.4 PERFORM INSULATION RESISTANCE MEASUREMENT.

Use a calibrated insulation resistance tester (Megger) at 500V for 1 minute to measure the resistance between conductor(s) and earth. Record values and ensure they meet project or manufacturer's criteria prior to proceeding with VLF test.

5.5 PREPARE TERMINATIONS, ENSURING CLEANLINESS AND DRYNESS.

Remove any temporary protection, clean the terminations with approved cleaning agents, and ensure the surfaces are dry and free of debris or moisture. Verify correct assembly of stress control components.

5.6 CONNECT VLF TEST SET BETWEEN CONDUCTOR AND METALLIC SCREEN (EARTH).

Connect the high-voltage output of the VLF generator to the conductor under test. Connect the return path to the metallic screen or grounding system. Ensure all connections are secure and that the test equipment is rated for the test voltage.

5.7 APPLY 11.43 KV RMSAT 0.1 HZ FOR 15 MINUTES.

Gradually ramp up the voltage 11.43 kV RMS. Maintain the voltage for the full duration of 15 minutes while monitoring the test equipment for current, voltage stability, and signs of insulation failure.

5.8 MONITOR FOR BREAKDOWNS, DISCHARGES OR CURRENT SPIKES.

Visually observe the test set and cable terminations. Monitor the current for any sharp increases or instability, which may indicate partial discharges or breakdowns.

5.9 DISCHARGE AND GROUND CABLE AFTER TEST COMPLETION.

After the test, slowly decrease the voltage to zero. Use a grounding rod to safely discharge any residual voltage from the conductor before handling.

5.10 REPEAT POINT 5.4

5.11 DOCUMENT ALL RESULTS IN THE ATTACHED TEST REPORT.

Complete the test report form, including all pre-checks, insulation readings, test parameters, observations, and results. Sign and submit the document for recordkeeping.

TEST REPORT

Cable Tag/ID: _____

Cable Type: _____

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☐ Cable properly tagged and identified

☐ Visual inspection of terminations completed

☐ Insulation resistance test performed

☐ Clean and dry termination surfaces

☐ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☐

5.13 TEST DETAILS

Megger before test: ☐

Test Method: VLF – 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☐

Equipment Used: _____

Serial Number: _____

Operator: _____

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☐

Breakdown occurred: Yes ☐/ No ☐

Final Result: PASS ☐/ FAIL ☐

NOTES: _____

_____

5.15 SIGNATURES

Tested by: _____ Signature: _____ Date: _____

Witnessed by: _____ Signature: _____ Date: _____

P-MV-3-TEMP
VLF Withstand Report
P-MV-3-TEMP - Maintenance Test
Auto Test
Test finished successfully

Report Information

Date	4/14/2025 14:45 AM
Company Name	ICS
Region	---
Station	---
Operator Name	RECHICHI
Work Order	---

Device Under Test (Cable XLPE)

Voltage Rating	11.5 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	C
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Test Purpose	Maintenance
Arc Management Mode	Trip out on Arc

#	Test Voltage	Waveform	Frequency	Duration
1	11.5 kV•	Sine	0.1 Hz (A)	15 min

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	11.5 kV•	122 µA•	16.9 nF	18 GΩ	0.1 Hz

•RMS value

TEST REPORT

Cable Tag/ID: P-MV-3-TEMP

Cable Type: 1X 240 mm2

Voltage Rating: 6/10 kV

5.12 PRE-TEST CHECKLIST

☑ Cable properly tagged and identified

☑ Visual inspection of terminations completed

☑ Insulation resistance test performed

☑ Clean and dry termination surfaces

☑ Metallic screen continuity verified

Client representative present during inspection: Yes ☐/ No ☑

5.13 TEST DETAILS

Megger before test: ☑

Test Method: VLF - 0.1 Hz

Test Voltage: 11.43 kV RMS

Duration: 15 minutes

Megger after test: ☑

Equipment Used: HVA 45

Serial Number: GH 5279.16 C0.10

Operator: FAUSTO RECHICHI

5.14 OBSERVATIONS

Partial Discharge observed: Yes ☐/ No ☑

Breakdown occurred: Yes ☐/ No ☑

Final Result: PASS ☑/ FAIL ☐

NOTES: _____

5.15 SIGNATURES

Tested by: FAUSTO RECHICHI Signature: _____ Date: 14/04/2025

Witnessed by: GIOVANNI TANGIANU Signature: _____ Date: 14/04/25.

ITEM	Tag	P-MV-3-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004770		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CABLE DATA

Type	Cores/Size mm²	Color
From	To	

1	Confirm cable is as specified in project cable schedule	OK
2	Visual Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Check gland plate for single core cables is non ferrous (non -magnetic).	OK
8	Confirm cable labelling is in accordance with specifications.	OK
9	Check cable is correctly loomed and segregated in accordance with specification.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check cores marking are in accordance with termination diagram	OK
12	Check terminations are in accordance with latest termination diagram	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	P-MV-3-TEMP	: MV Cable			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	LD
TASK	code	C10004770		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX08 HV Power Cable

CONTINUITY TESTS

1	CORE CONTINUITY	300	mΩ	OK
2	SCREEN CONTINUITY	300	mΩ	OK
3	ARMOUR CONTINUITY	300	mΩ	OK

1st INSULATION TEST

	Voltage applied:	2500	kV	
4	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
5	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
6	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

HV TEST 15 min

	Voltage applied:		kV	
7	Ph1 / Ph2-Ph3-screen-armour-Earth :		µA	Note
8	Ph2 / Ph1-Ph3-screen-armour-Earth:		µA	Note
9	Ph3 / Ph2-Ph1-screen-armour-Earth:		µA	Note

2nd INSULATION TEST

	Voltage applied:	2500	kV	
10	Ph1 / Ph2-Ph3-screen-armour-Earth :	>999	MΩ	OK
11	Ph2 / Ph1-Ph3-screen-armour-Earth:	>999	MΩ	OK
12	Ph3 / Ph2-Ph1-screen-armour-Earth:	>999	MΩ	OK

RE-CONNECT TERMINATIONS

13	Tightening torque		N.m

TESTING INSTRUMENTS USED

TYPE / SERIAL N°	Mod : KEW3125A S/N: W8330207	TYPE / SERIAL N°	Mod: HVA45 S/N: GH5219.16C010
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	LAT04200772/24_02.2024
TYPE / SERIAL N°	Mod: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N°	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments: Note :See attached certificate.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:36:19.084Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T16:47:17.107Z	

GENERATOR L3
VLF Withstand Report

Manual Test
Test finished successfully

Report Information

Date	11/30/2024 10:03 AM
Company Name	ICS
Region	---
Station	---
Operator Name	RIELA
Work Order	MT-MISURE

Device Under Test (Cable XLPE)

Voltage Rating	10.0 kV
Insulation	XLPE
Line Length	75 Meter
Size	1X240
Phase	C
Manufacturer Name	---

Equipment:

HVA45	GH5219.16C010

Test Setup

Arc Management Mode Trip out on Arc

#	first Voltage	Waveform	Frequency	Duration
1	10.0 kV•	Sine	0.1 Hz	5 min

Manual max. Voltage 10.0 kV

Measurements:

Test finished successfully

#	Voltage	Current	Cap.	Res.	Frequency
1	10.0 kV•	130 µA•	20.4 nF	491 MΩ	0.1 Hz

•RMS value

ITEM	Tag	JB100-TEMP	: Temporary JB			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004771		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX31	Junction and Marshalling Box

1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
7	Check all bolts are fitted and correcly tighted .	OK
8	Check all unused entries are suitably plugged.	OK
9	Check earthing and bonding against drawings.	OK
10	Check terminal blocks segregation barriers are fitted where necessary.	OK
11	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:36:32.219Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T15:58:11.196Z	

ITEM	Tag	PB100-1-TEMP	: Emergency push button internal B100			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004772		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	OK
4	Check nameplate data is correct.	OK
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:36:44.493Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T15:58:30.780Z	

ITEM	Tag	PB100-2-TEMP	: Emergency push button external B100			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004773		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX00 Miscellaneous Electrical Equipment

1	Check circuit is de-energized and safe.	OK
2	Check equipment is installed in accordance with layout drawing.	OK
3	Check equipment is undamaged and correcly tagged.	OK
4	Check nameplate data is correct.	OK
5	Check all bolts are fitted and all unused entries are suitably plugged.	OK
6	Check terminals for proper size and installation crimps	OK
7	Check earthing and bonding against drawings.	OK
8	Check items are properly fixed on support.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:37:43.649Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T15:58:39.714Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-PB100-1-TEMP	: LV cable JB100-TEMP/PB100-1-TEMP			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004774		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX10 Multicore Electrical Control Cable

CABLE DATA

Type | Cores/Size mm² . | Color

From | To

1	Check cable physical integrity	OK
2	Check cable data against latest cable schedule.	OK
3	Check cable routing against latest drawings (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to latest project Specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Check cable and core marking against latest drawings	OK
7	Check cable labelling is in accordance with latest specification.	OK
8	Check cable glands suit for cable type and are in accordance with latest specification.	OK
9	Check terminations are in accordance with latest termination diagram.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check gland plate for single core cables is non magnetic.	OK
12	If required produce Red Line Mark Up for "AS BUILT"	

CONTINUITY	CORE 1 / All cores+screen+armour+earth	0,4
	CORE 2 / All cores+screen+armour+earth	0,4
	CORE 3 / All cores+screen+armour+earth	0,4
	CORE 4 / All cores+screen+armour+earth	0,4
	CORE 5 / All cores+screen+armour+earth	NA
	CORE 6 / All cores+screen+armour+earth	NA
	CORE 7 / All cores+screen+armour+earth	NA
	CORE 8 / All cores+screen+armour+earth	NA
	CORE 9 / All cores+screen+armour+earth	NA
	CORE 10 / All cores+screen+armour+earth	NA
INSULATION	CORE 1	>999
	CORE 2	>999
	CORE 3	>999
	CORE 4	>999
	CORE 5	NA
	CORE 6	NA
	CORE 7	NA
	CORE 8	NA
	CORE 9	NA
	CORE 10	NA
	SCREEN	NA
	EARTH	NA
	ARMr	NA
	TEST VOLTS	500

TESTING INSTRUMENTS USED

TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	
TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N° :	
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:	

Comments:

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	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:37:55.756Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T15:58:51.975Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-PB100-2-TEMP	: LV cable JB100-TEMP/PB100-2-TEMP			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004775		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX10 Multicore Electrical Control Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Check cable physical integrity	OK
2	Check cable data against latest cable schedule.	OK
3	Check cable routing against latest drawings (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to latest project Specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Check cable and core marking against latest drawings	OK
7	Check cable labelling is in accordance with latest specification.	OK
8	Check cable glands suit for cable type and are in accordance with latest specification.	OK
9	Check terminations are in accordance with latest termination diagram.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check gland plate for single core cables is non magnetic.	OK
12	If required produce Red Line Mark Up for "AS BUILT"	

CONTINUITY	CORE 1 / All cores+screen+armour+earth	0,4
	CORE 2 / All cores+screen+armour+earth	0,4
	CORE 3 / All cores+screen+armour+earth	0,4
	CORE 4 / All cores+screen+armour+earth	0,4
	CORE 5 / All cores+screen+armour+earth	NA
	CORE 6 / All cores+screen+armour+earth	NA
	CORE 7 / All cores+screen+armour+earth	NA
	CORE 8 / All cores+screen+armour+earth	NA
	CORE 9 / All cores+screen+armour+earth	NA
	CORE 10 / All cores+screen+armour+earth	NA

INSULATION	CORE 1	>999
	CORE 2	>999
	CORE 3	>999
	CORE 4	>999
	CORE 5	NA
	CORE 6	NA
	CORE 7	NA
	CORE 8	NA
	CORE 9	NA
	CORE 10	NA
	SCREEN	NA
	EARTH	NA
	ARMr	NA
	TEST VOLTS	500

TESTING INSTRUMENTS USED

TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:
TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N° :
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:

Comments:

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	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-03	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T15:00:55.819Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T17:06:50.361Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	P-JB100-TEMP	: LV cable GEN-TEMP/JB100-TEMP			Dwg	
	S/Sys	82-99	: MV 6.6 kV Temporary Yard Supply Integrated Test			Module	
TASK	code	C10004776		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX10 Multicore Electrical Control Cable

CABLE DATA

Type	Cores/Size mm²	Color
From		To

1	Check cable physical integrity	OK
2	Check cable data against latest cable schedule.	OK
3	Check cable routing against latest drawings (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to latest project Specification.	OK
5	Check bending radius is within the specified limits.	OK
6	Check cable and core marking against latest drawings	OK
7	Check cable labelling is in accordance with latest specification.	OK
8	Check cable glands suit for cable type and are in accordance with latest specification.	OK
9	Check terminations are in accordance with latest termination diagram.	OK
10	Check cable earthing against lastest drawings.	OK
11	Check gland plate for single core cables is non magnetic.	OK
12	If required produce Red Line Mark Up for "AS BUILT"	

CONTINUITY	CORE 1 / All cores+screen+armour+earth	O,5	
	CORE 2 / All cores+screen+armour+earth	O,5	
	CORE 3 / All cores+screen+armour+earth	O,5	
	CORE 4 / All cores+screen+armour+earth	O,5	
	CORE 5 / All cores+screen+armour+earth	NA	
	CORE 6 / All cores+screen+armour+earth	NA	
	CORE 7 / All cores+screen+armour+earth	NA	
	CORE 8 / All cores+screen+armour+earth	NA	
	CORE 9 / All cores+screen+armour+earth	NA	
	CORE 10 / All cores+screen+armour+earth	NA	
INSULATION	CORE 1	>999	
	CORE 2	>999	
	CORE 3	>999	
	CORE 4	>999	
	CORE 5	NA	
	CORE 6	NA	
	CORE 7	NA	
	CORE 8	NA	
	CORE 9	NA	
	CORE 10	NA	
	SCREEN	NA	
	EARTH	NA	
	ARMr	NA	
	TEST VOLTS	500	

TESTING INSTRUMENTS USED

TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:
TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)	TYPE / SERIAL N° :
Calibration certificate N° and date:	N°7715/24 _ 10/07/2024	Calibration certificate N° and date:

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-02	2024-12-03	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T16:38:20.245Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T15:59:11.616Z	

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

NOT APPLICABLE

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

NOT APPLICABLE

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

NOT APPLICABLE

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE