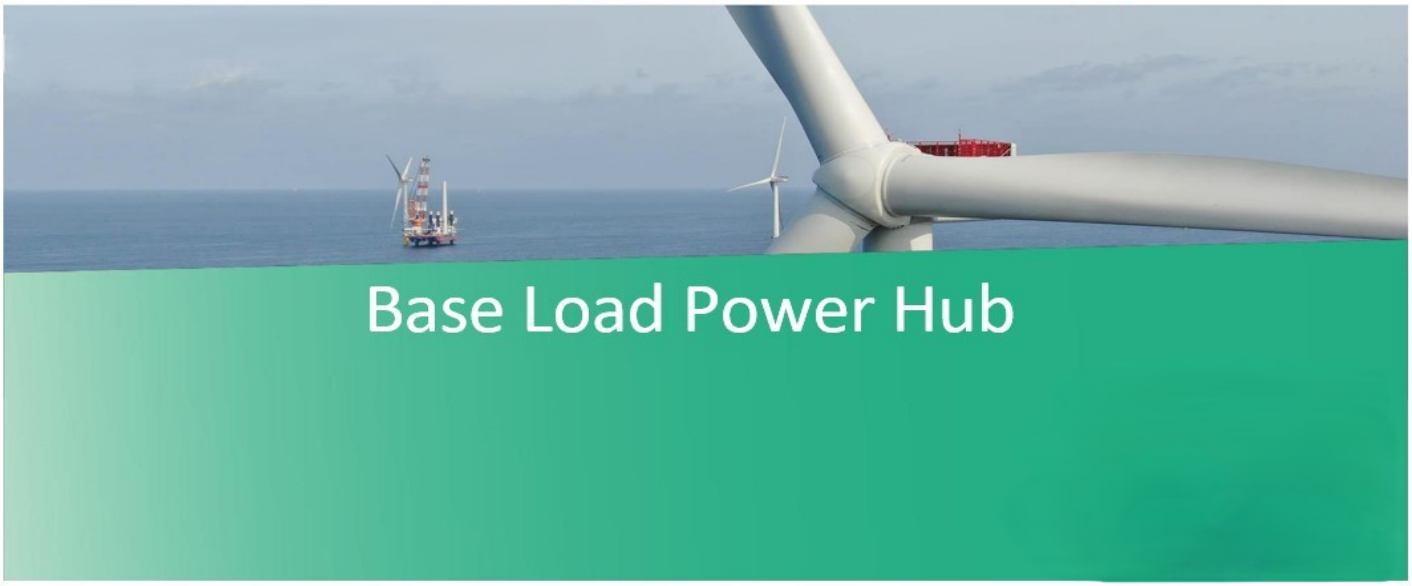
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM

87

Instrumentation Systems incl. general control room equipment

SUBSYSTEM

87-10-11

Junction Box 00-JE-12006 and Multi-core cable (PCS System)

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

Sub System N°:	87-10-11	Tick as appropriate	ONSHORE	O
Description:	Junction Box 00-JE-12006 and Multi-core cable (PCS System)		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*	NA
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*	NA
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	O
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:	2024-12-18	
System:	87	/	Instrumentation Systems incl. general control room equipment		
SubSystem:	87-10-11	/	Junction Box 00-JE-12006 and Multi-core cable (PCS System)		

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 6

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	2024-12-19	2024-12-20	2024-12-21	2024-12-21
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-19T16:25:11.463Z	PROVERLIS Digitaly signed by Anthony Iveson 2024-12-20T16:32:02.787Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-21T09:50:53.119Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-21T09:50:58.157Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 87-10-11 & process: MC

Instrumental	87-10-11 Junction Box 00-JE-12006 and Multi-core cable (PCS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
00-JE-12006	DI JB TO PCS	ONSHORE	C10002245	CJX31	100	2024-12-03	RFC 1
00-JE-12006_1/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	ONSHORE	C10002246	CJX10	100	2024-11-25	RFC 1
00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	ONSHORE	C10002247	CJX10	100	2024-11-25	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	87	Instrumentation Systems incl. general control room equipment
SUBSYSTEM	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000867	A	00-JE-12006_2/ B400-PCS-002 C10002247	Missing on the BTM the grower. See Note 6 ,on the reference doc (123A90-FDL-EL-DD-20090). See attached photo.	.		Gtangianu 2024-11-25	2024-12-18	Gtangianu 2024-12-18	2024-12-18
C30001166	A	00-JE-12006 C10002245	Missing earthing jumper from the door to (00-JE-12006).	.		Gtangianu 2024-12-03	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07
C30000862	B	00-JE-12006_2/ B400-PCS-002 C10002247	"Identification tag wires missing side B400-FGS-002 and tag wires is wrong side 00-JE-012006. connection. See attached photo. "	.		Gtangianu 2024-11-25			
C30000864	B	00-JE-12006_2/ B400-PCS-002 C10002247	"1) Missing copper grease on earthing connection (00-JE-12006).	.		Gtangianu 2024-11-25			
C30000865	B	00-JE-12006_2/ B400-PCS-002 C10002247	Missing cable tags on routing, inside and outside the panels	.		Gtangianu 2024-11-25			
C30000868	B	00-JE-12006_1/ B400-PCS-002 C10002246	Identification tag wires missing side B400-PCS-002 and tag wires is wrong side (00-JE-12006_TB-1)	.		Gtangianu 2024-11-25			
C30000869	B	00-JE-12006_1/ B400-PCS-002 C10002246	Missing cable tags on routing, inside and outside the panels	.		Gtangianu 2024-11-25			
C30000870	B	00-JE-12006_1/ B400-PCS-002 C10002246	Cable is not alligned at (00-JE-12006) cable gland entry, to be better dressed to mantain bending radius. See attached photo. "	.		Gtangianu 2024-11-25			
C30001167	B	00-JE-12006 C10002245	Missing plugs on the (00-JE-12006)	.		Gtangianu 2024-12-03	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	87	Instrumentation Systems incl. general control room equipment
SUBSYSTEM	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000867	A	00-JE-12006_2/ B400-PCS-002 C10002247	Missing on the BTM the grower. See Note 6 ,on the reference doc (123A90-FDL-EL-DD-20090). See attached photo.	.		Gtangianu 2024-11-25	2024-12-18	Gtangianu 2024-12-18	2024-12-18
C30001166	A	00-JE-12006 C10002245	Missing earthing jumper from the door to (00-JE-12006).	.		Gtangianu 2024-12-03	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07
C30000862	B	00-JE-12006_2/ B400-PCS-002 C10002247	"Identification tag wires missing side B400-FGS-002 and tag wires is wrong side 00-JE-012006. connection. See attached photo. "	.		Gtangianu 2024-11-25	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000864	B	00-JE-12006_2/ B400-PCS-002 C10002247	"1) Missing copper grease on earthing connection (00-JE-12006).	.		Gtangianu 2024-11-25	2024-12-27	Ecarotenuto 2024-12-27	2024-12-27
C30000865	B	00-JE-12006_2/ B400-PCS-002 C10002247	Missing cable tags on routing, inside and outside the panels	.		Gtangianu 2024-11-25	2025-02-03	APolo 2025-02-03	2025-02-03
C30000868	B	00-JE-12006_1/ B400-PCS-002 C10002246	Identification tag wires missing side B400-PCS-002 and tag wires is wrong side (00-JE-12006_TB-1)	.		Gtangianu 2024-11-25	2025-02-21	JKrizanic 2025-02-21	2025-02-21
C30000869	B	00-JE-12006_1/ B400-PCS-002 C10002246	Missing cable tags on routing, inside and outside the panels	.		Gtangianu 2024-11-25	2025-02-03	APolo 2025-02-03	2025-02-03
C30000870	B	00-JE-12006_1/ B400-PCS-002 C10002246	Cable is not alligned at (00-JE-12006) cable gland entry, to be better dressed to mantain bending radius. See attached photo. "	.		Gtangianu 2024-11-25	2025-01-21	APolo 2025-01-21	2025-01-21
C30001167	B	00-JE-12006 C10002245	Missing plugs on the (00-JE-12006)	.		Gtangianu 2024-12-03	2024-12-07	Ecarotenuto 2024-12-07	2024-12-07

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001167

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002245	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006	DI JB TO PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Missing plugs on the (00-JE-12006)

Name: Giovanni Tangianu

Date: 2024-12-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000862

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002247	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

"Identification tag wires missing side B400-PCS-002 and tag wires is wrong side 00-JE-012006. connection.
See attached photo.
"

Name: Giovanni Tangianu
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

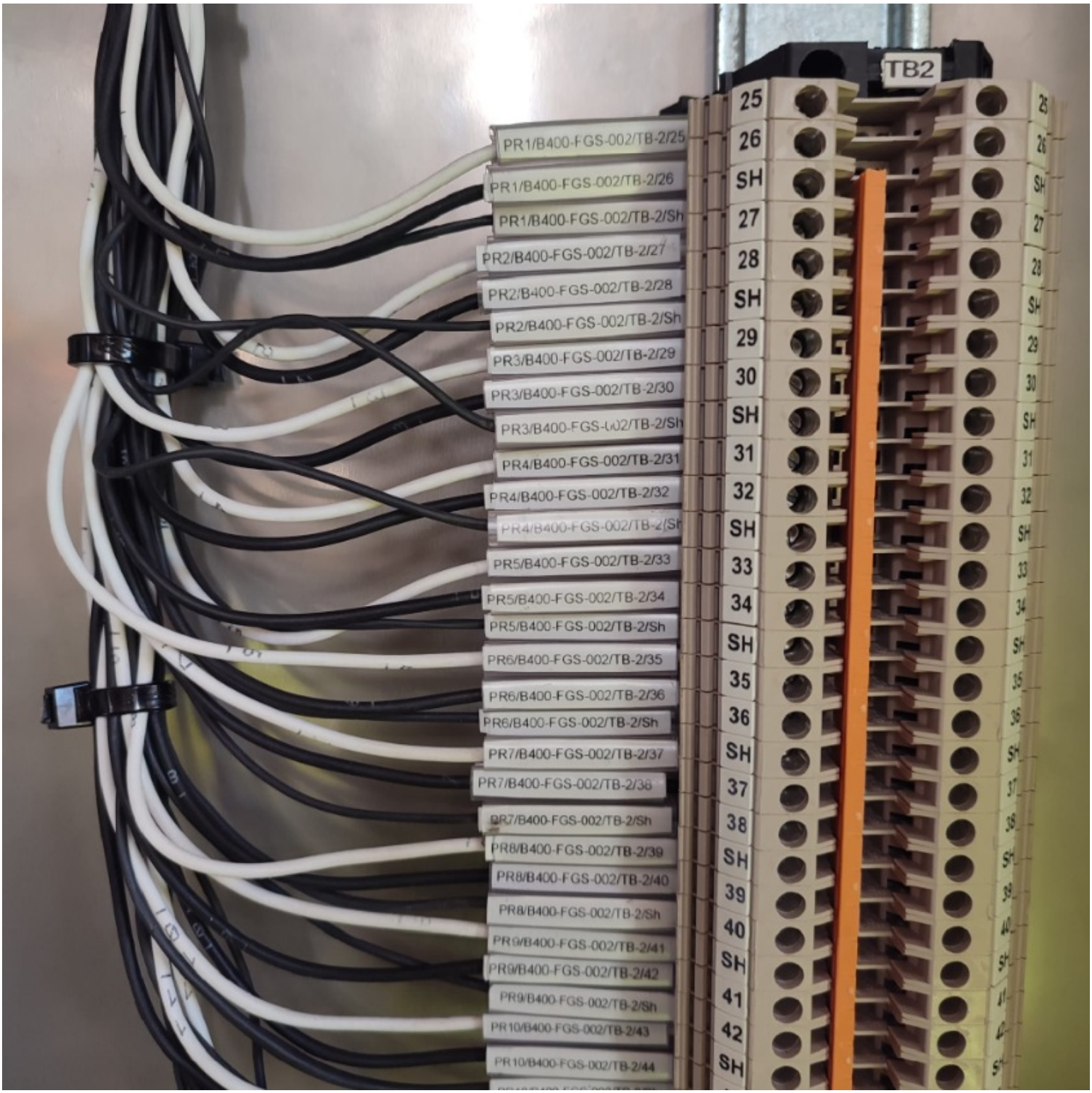
5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TB2
PR1/B400-FGS-002/TB-2/25
PR1/B400-FGS-002/TB-2/26
PR1/B400-FGS-002/TB-2/Sh
PR2/B400-FGS-002/TB-2/27
PR2/B400-FGS-002/TB-2/28
PR2/B400-FGS-002/TB-2/Sh
PR3/B400-FGS-002/TB-2/29
PR3/B400-FGS-002/TB-2/30
PR3/B400-FGS-002/TB-2/Sh
PR4/B400-FGS-002/TB-2/31
PR4/B400-FGS-002/TB-2/32
PR5/B400-FGS-002/TB-2/33
PR5/B400-FGS-002/TB-2/34
PR5/B400-FGS-002/TB-2/Sh
PR6/B400-FGS-002/TB-2/35
PR6/B400-FGS-002/TB-2/36
PR6/B400-FGS-002/TB-2/Sh
PR7/B400-FGS-002/TB-2/37
PR7/B400-FGS-002/TB-2/38
PR7/B400-FGS-002/TB-2/Sh
PR8/B400-FGS-002/TB-2/39
PR8/B400-FGS-002/TB-2/40
PR8/B400-FGS-002/TB-2/Sh
PR9/B400-FGS-002/TB-2/41
PR9/B400-FGS-002/TB-2/42
PR9/B400-FGS-002/TB-2/Sh
PR10/B400-FGS-002/TB-2/43
PR10/B400-FGS-002/TB-2/44
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ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000864

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002247	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

"1) Missing copper grease on earthing connection (00-JE-12006).

Name: Giovanni Tangianu
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto
Date: 2024-12-27
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000865

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002247	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Missing cable tags on routing, inside and outside the panels

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000867

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002247	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Missing on the BTM the grower. See Note 6 ,on the reference doc (123A90-FDL-EL-DD-20090).

See attached photo.

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

installed.

Name: Giovanni Tangianu

Date: 2024-12-18

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000868

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002246	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_1/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Identification tag wires missing side B400-PCS-002 and tag wires is wrong side (00-JE-12006_TB-1)

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-21

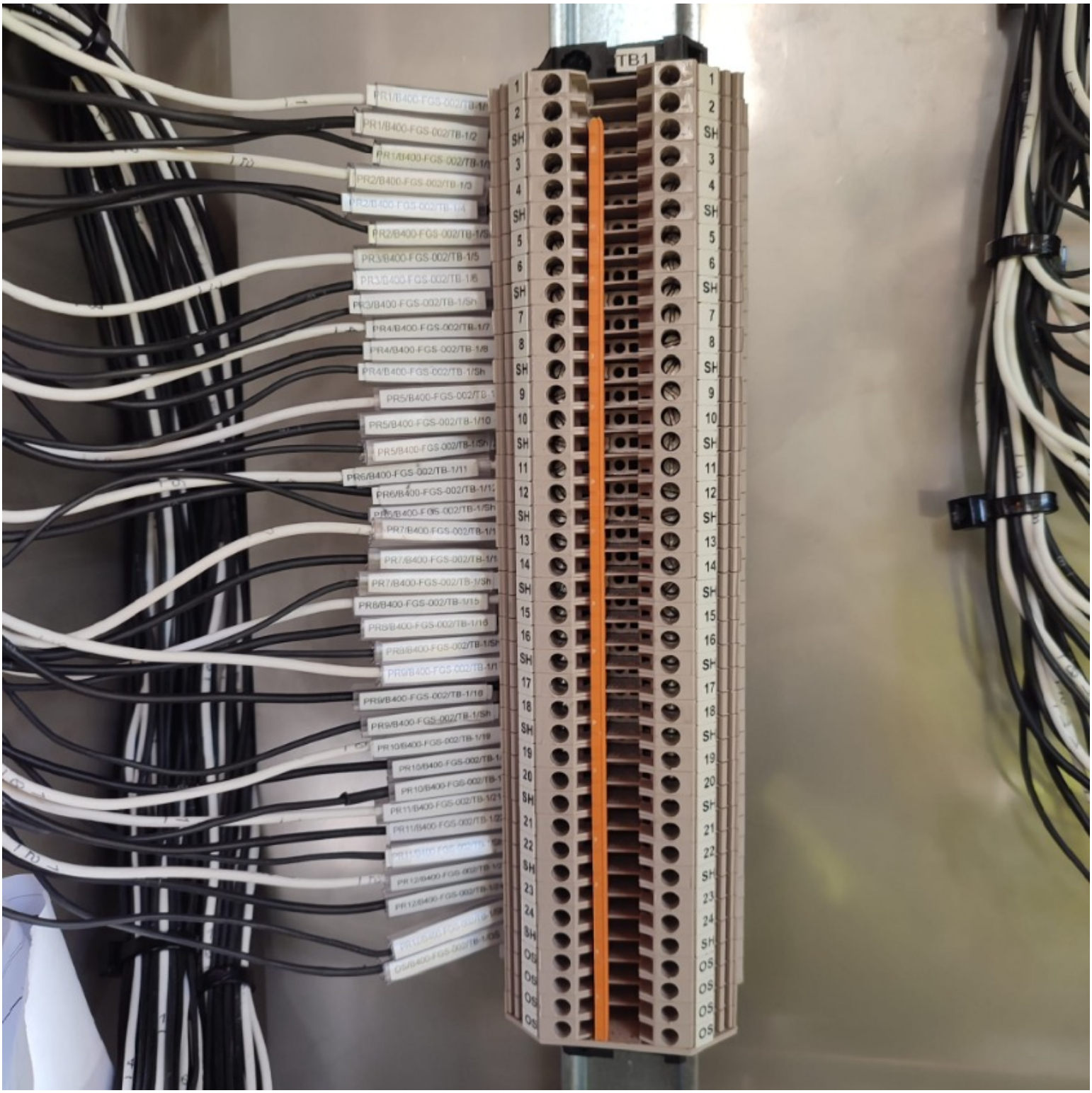
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TB1
PR1/B400-FGS-002/TB-1/2
PR2/B400-FGS-002/TB-1/3
PR3/B400-FGS-002/TB-1/5
PR3/B400-FGS-002/TB-1/Sh
PR4/B400-FGS-002/TB-1/7
PR4/B400-FGS-002/TB-1/8
PR4/B400-FGS-002/TB-1/Sh
PR5/B400-FGS-002/TB-1/10
PR6/B400-FGS-002/TB-1/11
PR7/B400-FGS-002/TB-1/Sh
PR8/B400-FGS-002/TB-1/15
PR8/B400-FGS-002/TB-1/16
PR9/B400-FGS-002/TB-1/18
PR9/B400-FGS-002/TB-1/Sh
PR10/B400-FGS-002/TB-1/19
PR11/B400-FGS-002/TB-1/21
PR12/B400-FGS-002/TB-1/24

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000869

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002246	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_1/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Missing cable tags on routing, inside and outside the panels

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000870

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002246	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006_1/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Cable is not alligned at (00-JE-12006) cable gland entry, to be better dressed to mantain bending radius.

See attached photo.
"

Name: Giovanni Tangianu
Date: 2024-11-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

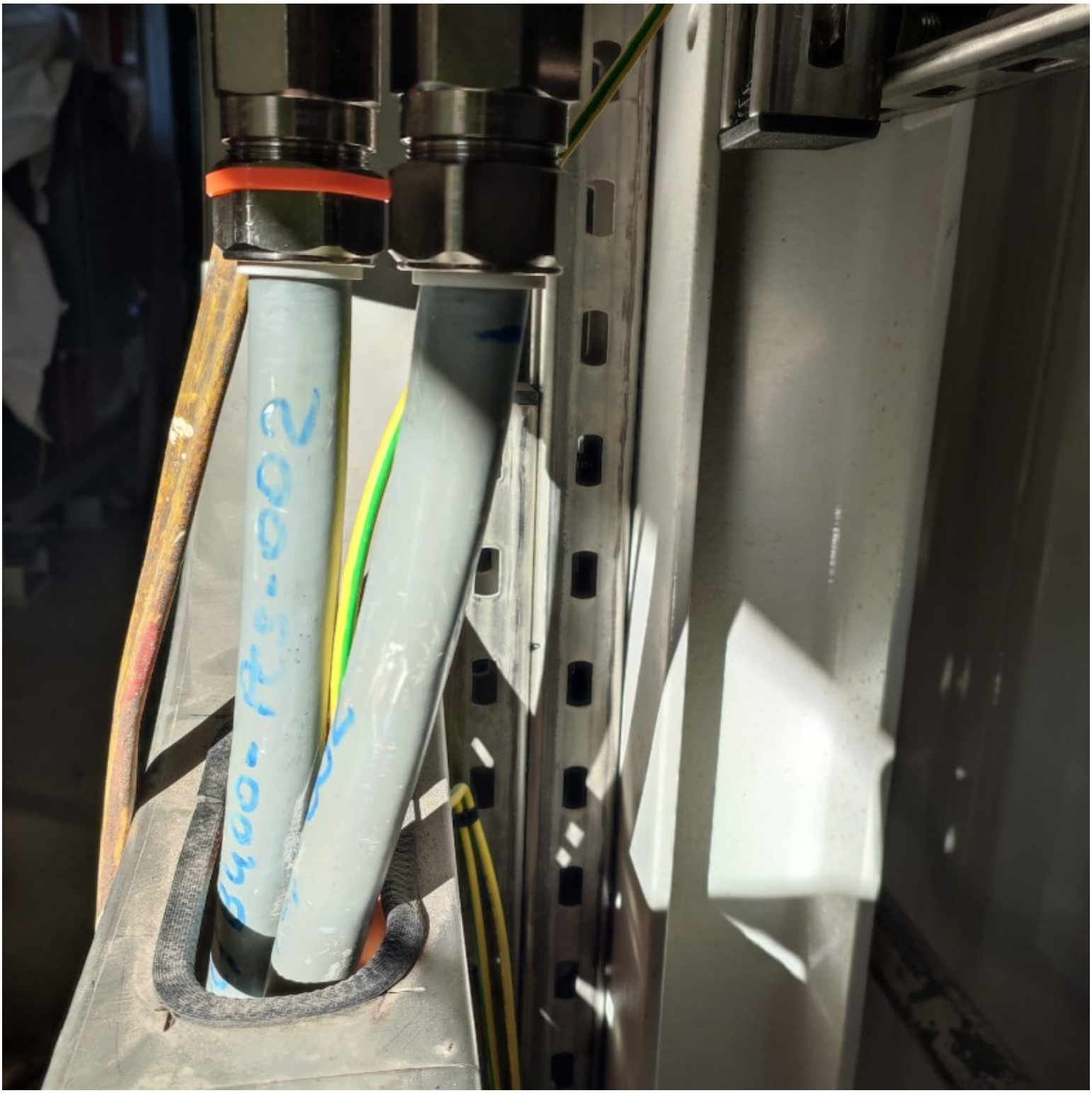
5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


540-R3-002

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001166

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002245	1.4 Discipline	Instrumental
1.2 Item	00-JE-12006	DI JB TO PCS	
1.3 Subsystem	87-10-11	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	

2 - OBSERVATION

Missing earthing jumper from the door to (00-JE-12006).

Name: Giovanni Tangianu
Date: 2024-12-03
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-12-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto
Date: 2024-12-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

NOT APPLICABLE

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

NOT APPLICABLE

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 87-10-11 & process: MC & discipline : I

Instrumental	87-10-11 Junction Box 00-JE-12006 and Multi-core cable (PCS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
00-JE-12006	DI JB TO PCS	ONSHORE	C10002245	CJX31	100	2024-12-03	RFC 1
00-JE-12006_1/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	ONSHORE	C10002246	CJX10	100	2024-11-25	RFC 1
00-JE-12006_2/B400-PCS-002	DI JB TO PCS / MARSHALLING PCS	ONSHORE	C10002247	CJX10	100	2024-11-25	RFC 1

ITEM	Tag	00-JE-12006	: DI JB TO PCS			Dwg	126A90-DDL-IN-DL-40080
	S/Sys	87-10-11	: Junction Box 00-JE-12006 and Multi-core cable (PCS System)			Module	LD
TASK	code	C10002245		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX31		Junction and Marshalling Box

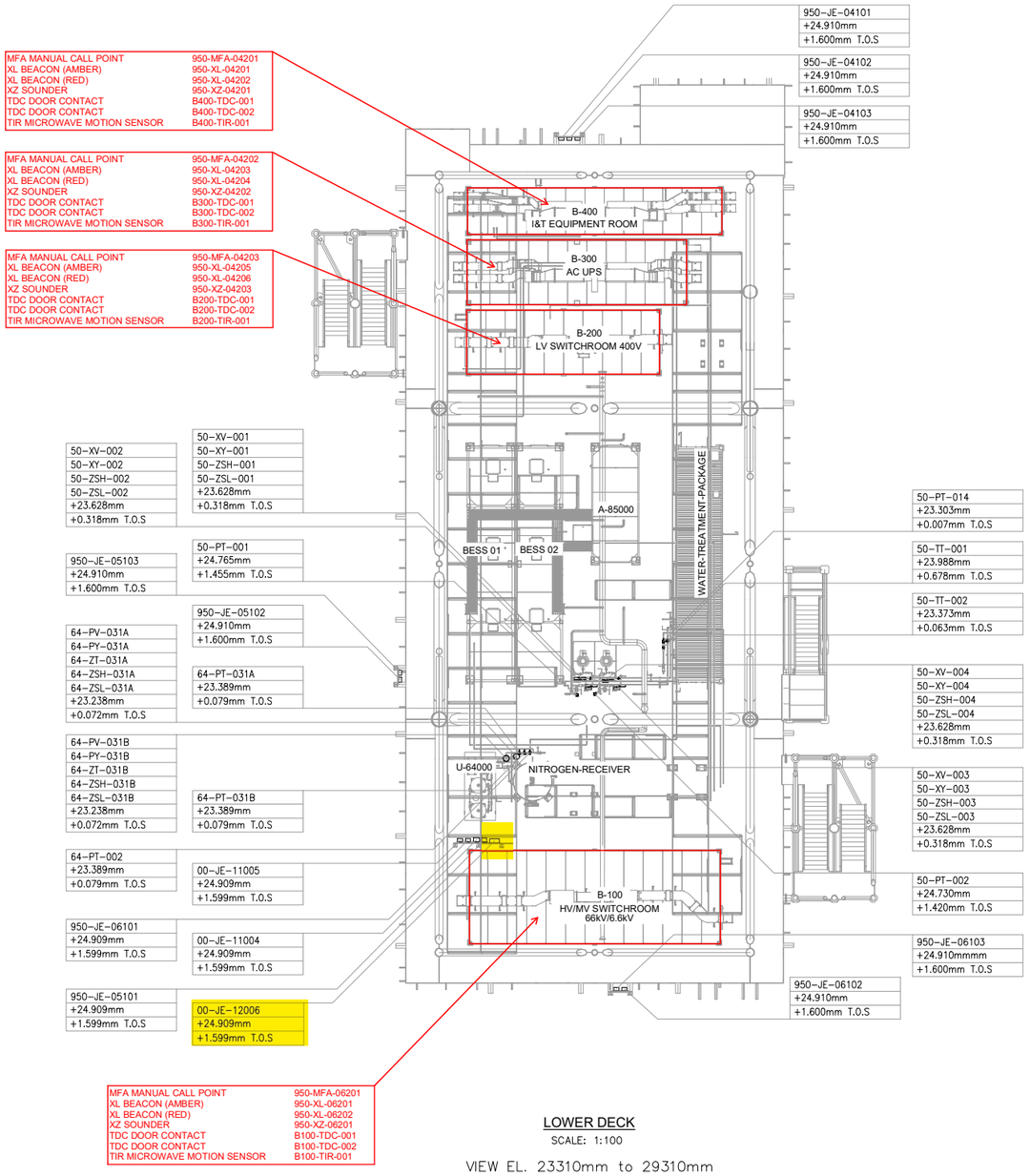
1	Check equipment is de-energized and safe.	OK
2	Check available documents are at the latest revision.	OK
3	Check nameplate data/certification is in accordance with project data.	OK
4	Check all flange faces are clean and greased with approved lubicants, and that all bolts are fitted and correctly tight (Exd only).	NA
5	Check all gaskets and bolts are fitted in covers and gland plates (where applicable).	OK
6	Check enclosure is correctly tagged as per drawing.	OK
7	Check enclosure is correctly earthed in accordance with project data.	PL
8	Check that all unused entries are plugged with approved blanks.	PL
9	Check that terminals are approved and that the correct numbers are fitted.	OK
10	Check segregation barriers are fitted where necessary.	NA
11	Check enclosure is correctly mounted and easily accessible.	OK
12	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 2024-12-02T07:18:12.010Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T13:24:22.777Z	

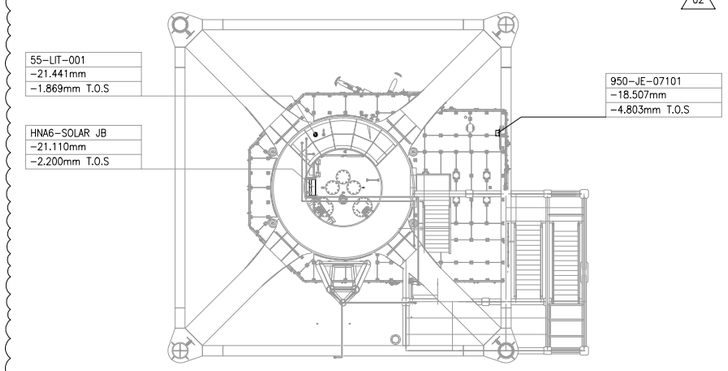
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

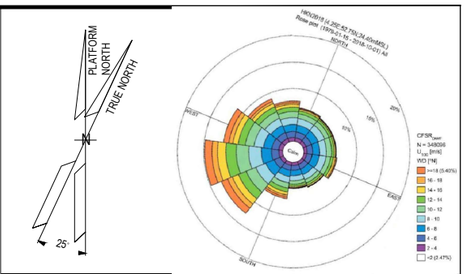


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



TRANSITION PIECE
SCALE: 1:100
VIEW EL. 17050mm to 23310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40080**

REV.:	DATE:	SIGNATURE:
2_B	16/10/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40080	SHEET 001	REV. 02

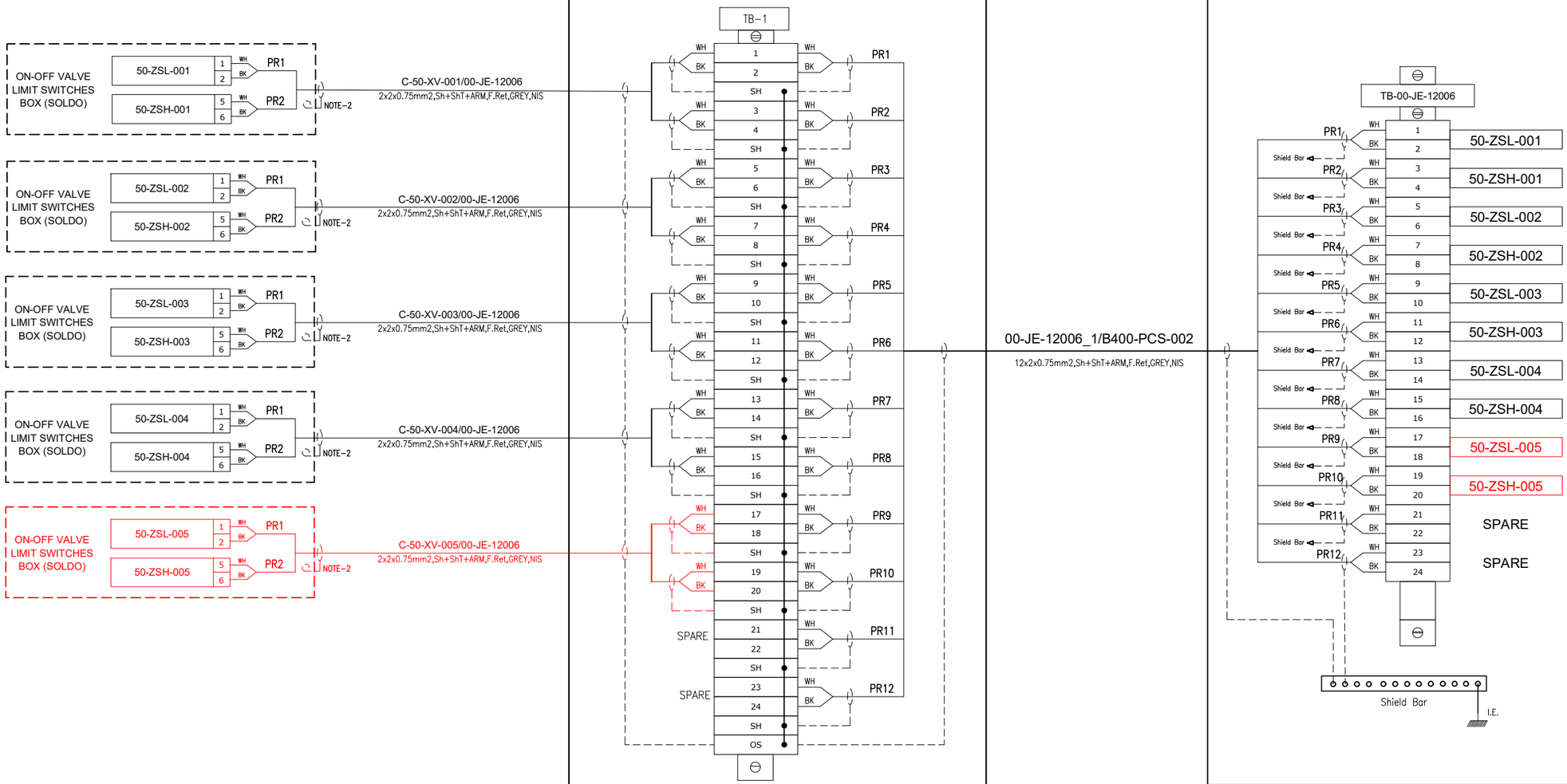
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00–JE–12006–SH.1 OF 2

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
A3	DRAWING NO. 123A90–DDL–IN–DG–40015	SHEET 022	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH, BK — NOTE-2

64-ZSH-031A (5, 6) WH, BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH, BK — NOTE-2

64-ZSH-031B (5, 6) WH, BK — NOTE-2

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

WH/BK	25	WH/BK	PR1
	26		
	SH		
WH/BK	27	WH/BK	PR2
	28		
	SH		
WH/BK	29	WH/BK	PR3
	30		
	SH		
WH/BK	31	WH/BK	PR4
	32		
	SH		
SPARE	33	WH/BK	PR5
	34		
	SH		
SPARE	35	WH/BK	PR6
	36		
	SH		
SPARE	37	WH/BK	PR7
	38		
	SH		
SPARE	39	WH/BK	PR8
	40		
	SH		
SPARE	41	WH/BK	PR9
	42		
	SH		
SPARE	43	WH/BK	PR10
	44		
	SH		
SPARE	45	WH/BK	PR11
	46		
	SH		
SPARE	47	WH/BK	PR12
	48		
	SH		
	OS		

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1 WH/BK	25	64-ZSL-031A
Shield Bar	26	
PR2 WH/BK	27	64-ZSH-031A
Shield Bar	28	
PR3 WH/BK	29	64-ZSL-031B
Shield Bar	30	
PR4 WH/BK	31	64-ZSH-031B
Shield Bar	32	
PR5 WH/BK	33	SPARE
Shield Bar	34	
PR6 WH/BK	35	SPARE
Shield Bar	36	
PR7 WH/BK	37	SPARE
Shield Bar	38	
PR8 WH/BK	39	SPARE
Shield Bar	40	
PR9 WH/BK	41	SPARE
Shield Bar	42	
PR10 WH/BK	43	SPARE
Shield Bar	44	
PR11 WH/BK	45	SPARE
Shield Bar	46	
PR12 WH/BK	47	SPARE
	48	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-12006-SH.2 OF 2

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 023	REV. 01

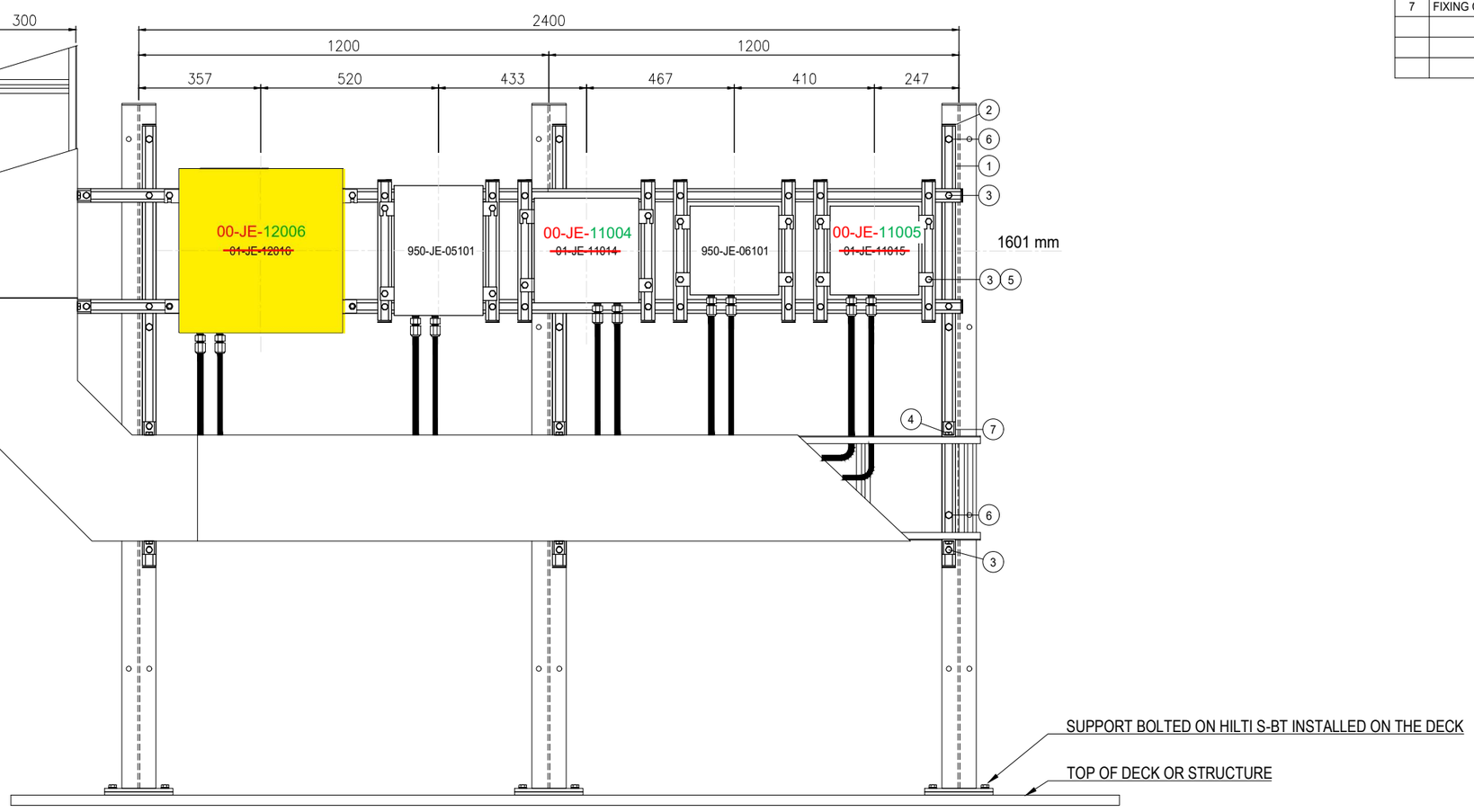
File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DD-40017

REV. 00

JB-12

POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	14m
2	LDPE PLUG FOR U-CHANNEL 41x41	26
3	AISI 316L SPRING NUT M10 FOR U-CHANNEL 41X41 + BOLT M10x35 + WASHER M10	56
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	10
5	AISI 316L M10 SINGLE HOLE SQUARE FIXING PLATE FOR U-CHANNEL 41x41	20
6	AISI 316L BOLT M12X35 + NUT M12 + WASHER M12	9
7	FIXING CLAMP FOR CABLE TRAY/LADDER	10



NOTES

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	02/09/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	11/07/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DD-40017**

REV.:	DATE:	SIGNATURE:
1_F	02/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

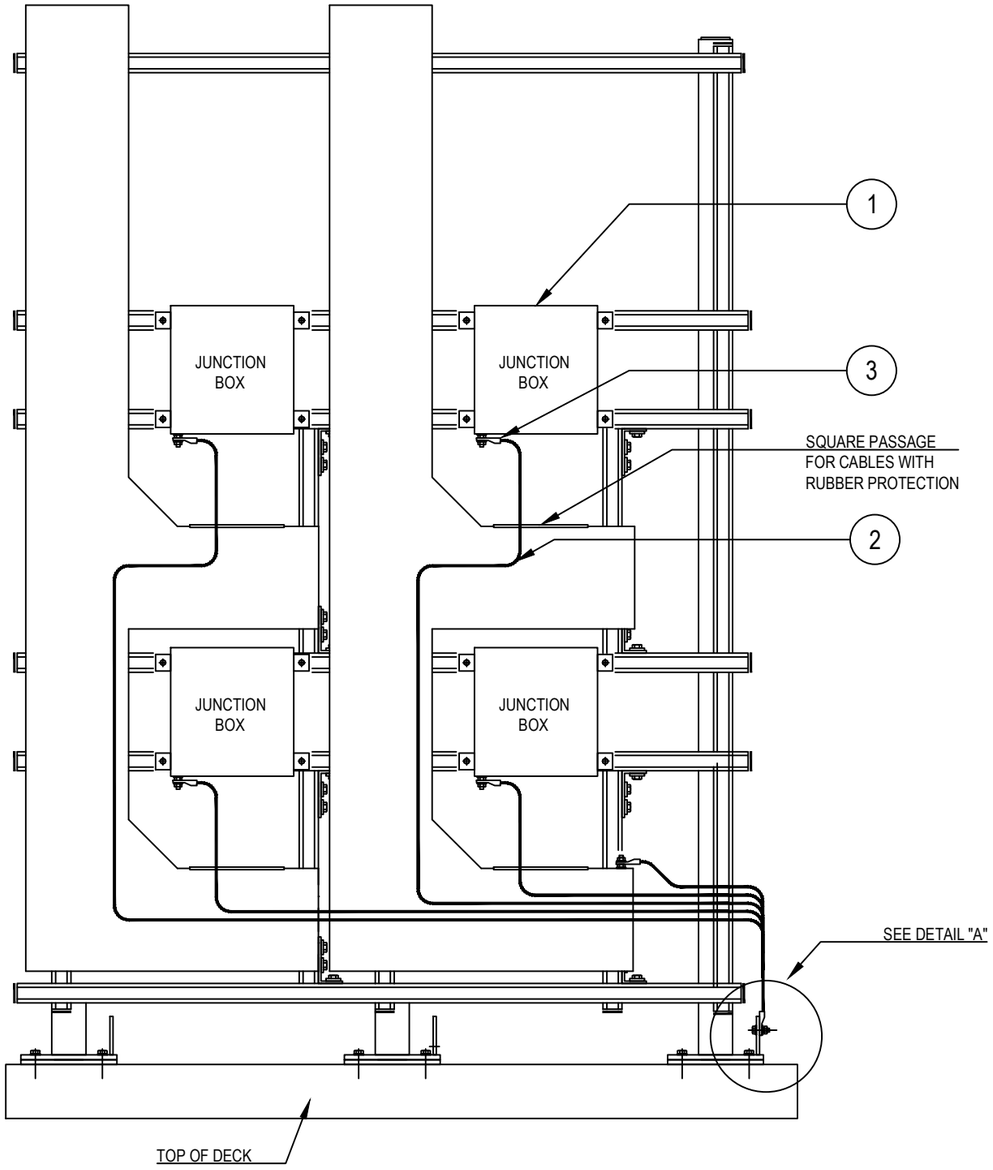
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
JUNCTION BOXES ON RACK

CONTRACT NO./TITLE			SCALE /
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 11/07/2024

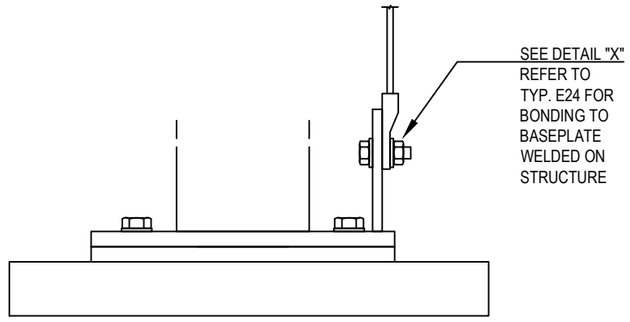
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 015	REV. 01

E15

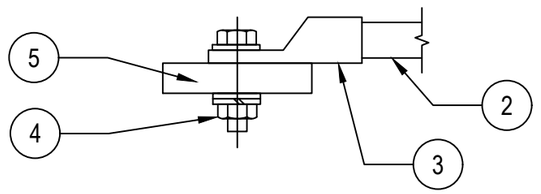


POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	Y / G INSULATING COPPER CONDUCTOR	COPPER	$6mm^2$		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	AISI 316L	$6mm^2$		~~NOTE 1~~
4	HEXAD BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M8X30		
5	EARTHING PLATE	AISI 316L			NOTE 2

DETAIL "A"



DETAIL "X"



NOTES:

~~1) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

2) EARTHING PLATE WELDED ON BASE PLATE OF THE COLUM SUPPORT. SEE TYPICAL DETAIL E24

2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL AND INSTRUMENTALE JB MOUNTED ON RACK SUPPORT

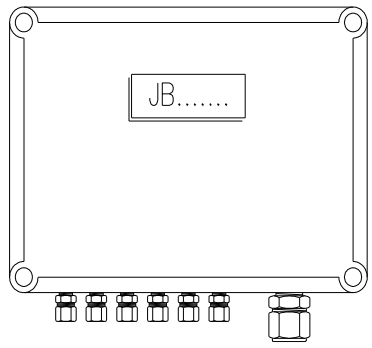
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90–DDL–EL–DD–20090 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

ELECTRICAL HOOK-UP FOR JUNCTION BOXES



Ex-d Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
		1	2	3	4	5	7
		M20S	M20	M25	M32	M50	M20
00-JE-11001	26	18		2			6
00-JE-11002	13	10		1			2
00-JE-11003	26	19		2			5
00-JE-11004	13	9		1			3
00-JE-11005	7	3		1			3
00-JE-12001	26	8	6	2			10
00-JE-12002	7	4		1			2
00-JE-12003	7	4	1	1			1
00-JE-12004	26	8	6	2			10
00-JE-12005	13	4	1	1			7
00-JE-12006	26	4	4	2			16
00-JE-13001	13		8		1		4
00-JE-13002	13		7		1		5
00-JE-13003	7		4	1			2
00-JE-21001	13		6		1		6
00-JE-22001	26		8	6	2		10
00-JE-22002	26		12	4	2		8
00-JE-23001	13		6		1		6
00-JE-23002	7		4	1			2
950-JE-01101	7		4		1		2
950-JE-01102	7		3		1		3
950-JE-01103	7		3	1			3
950-JE-01104	7		4	1			2
950-JE-02101	13		10			1	2
950-JE-02102	13		10			1	2
950-JE-02103	7		4		1		2
950-JE-02104	7		3	1			3
950-JE-03101	13		7			1	5
950-JE-03102	7		5		1		1
950-JE-03103	7		4	1			2
950-JE-03104	7		6	1			0
950-JE-04101	7		4		1		2
950-JE-04102	7		2	1			4
950-JE-04103	7		6	1			0
950-JE-04201	7		6		1		0
950-JE-04203	7		6	1			0
950-JE-04205	7		6		1		0

Ex-d Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
		1	2	3	4	5	7
		M20S	M20	M25	M32	M50	M20
950-JE-04207	13		8		1		4
950-JE-05101	13		10			1	2
950-JE-05102	7		4	1			2
950-JE-05103	7		4	1			2
950-JE-05104	7		3	1			3
950-JE-06101	7		2		1		4
950-JE-06102	7		2	1			4
950-JE-06103	7		5	1			1
950-JE-06201	7		6		1		0
950-JE-06203	7		6	1			0
950-JE-07101	7		3	1			3
TOTALS		91	219	43	18	4	166

Ex-i Junction Boxes							
TAGNAME	ENTRIES	POSITION (CABLE GLANDS)					PLUGS
			6	7			9
		M20S	M20	M25	M32	M50	M20
950-JE-04204	7		6	1			0
950-JE-04208	7		6	1			0
950-JE-06204	7		6	1			0
TOTALS		0	18	3	0	0	0

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

REV.:	DATE:	SIGNATURE:
2_D	13/11/24	G.Randi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001299 DD 27/06/2024
- ITEM.: 5
- Q.TY: 5
- JB MATERIAL: INOX316L
- EXTERNAL PAINTING: NOT PAINTED
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

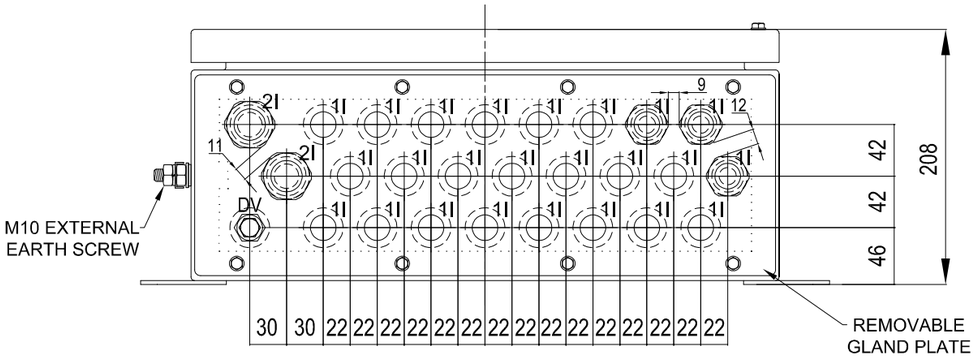
N°	Q.TY	CODE	DESCRIPTION
IF	1	B48-443	INTERNAL MOUNTING FRAME
TB-1	40	WDU2,5A	Ex eb TERMINAL BLOCK 2,5mmq BEIGE COLOUR (WEIDMULLER)
TB-2	40	WDU2,5A	Ex eb TERMINAL BLOCK 2,5mmq BEIGE COLOUR (WEIDMULLER)
DV	1	ECDE-D1S	Ex eb IIC Gb INOX DRAIN VALVE ISO M20x1.5

TAG LIST
MATERIAL: INOX
DIMENSION: 60x20

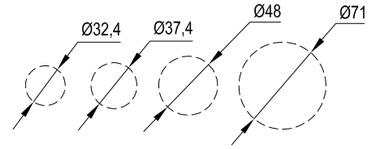
DESCRIPTION
00-JE-11001
00-JE-11003
00-JE-12001
00-JE-12004
00-JE-12006

BOTTOM SIDE

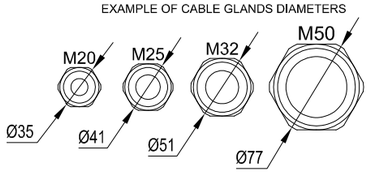
2I - n°2 Ø25.5
1I - n°24 Ø20.5



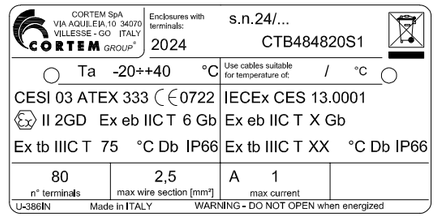
EXAMPLE OF STAR WASHERS DIAMETERS (WEIDMULLER SZS SERIES)



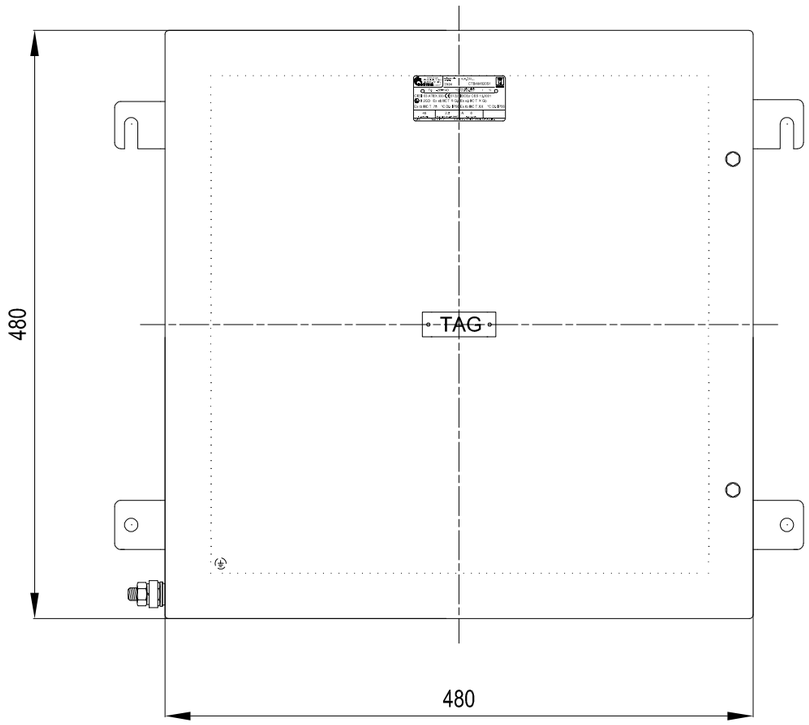
EXAMPLE OF CABLE GLANDS DIAMETERS



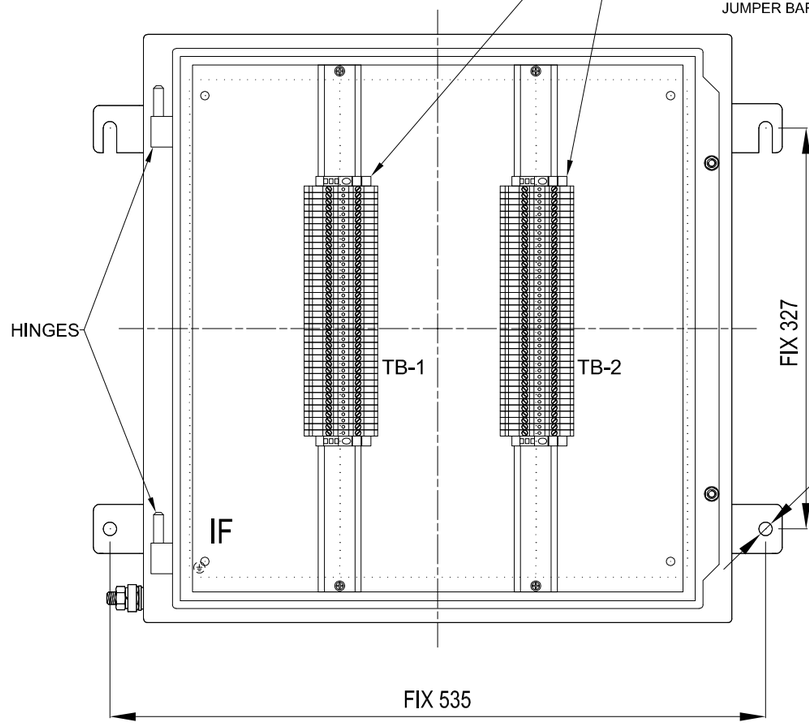
CERTIFICATE NAMEPLATE



EXTERNAL VIEW



INTERNAL VIEW



TERMINAL BLOCK NUMBERING:
TB-1: 1, 2, SH, 3, 4, SH ..... 23, 24, SH, OS, OS, OS, OS

TERMINAL BLOCK NUMBERING:
TB-2: 25, 26, SH, 27, 28, SH ..... 47, 48, SH, OS, OS, OS, OS

NOTE:
JUMPER BAR CONNECTED TO ALL "SH" AND "SHT" TERMINALS

NOTE CORTEM:
- COMM: COV2402708
- RIGA: 5
- Q.TY: 5
- ART. INFOR: CTB484820S1/C2402708/60.
- METTERE LA MORSETTIERA PIU' IN ALTO POSSIBILE E LA BARRA DIN PIU' LUNGA POSSIBILE

REV.4 - 18/07/2024 - FRATTARUOLO

REV.	DATE	PREP'D	CHK'D	APP'D	DESCRIPTION
5	08/08/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR CONSTRUCTION (IFC)
4	18/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
3	17/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
2	16/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
1	10/07/2024	FRATTARUOLO	GIUSTI	GRATTON	REISSUED FOR APPROVAL
0	28/06/2024	FRATTARUOLO	GIUSTI	GRATTON	ISSUED FOR APPROVAL

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
005 CTB484820S1/C2402708/60.

CORTEM JOB: COV2402708
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27524
SHEET 5 / NEXT 6 / TOT. 11

CORTEM GROUP
cortem
FONDISONZO
ELFIT

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AND IT CANNOT BE REPRODUCED WITHOUT CORTEM'S AUTHORIZATION

Smart Professional R. 2012

Instrument Junction Boxes Tag list

Ex-e Execution type

M.C. 6x2x0,75mm^2

	TYPE 1A (AI/AO/DI)
1	00-JE-11005
2	00-JE-12002
3	00-JE-12003
4	00-JE-21002
5	950-JE-01103
6	950-JE-03103
7	950-JE-04102
8	SPARE
9	SPARE
10	950-JE-05102
11	950-JE-06102
12	SPARE

M.C. 6x3x2,5mm^2

	TYPE 1B (AI)
1	950-JE-01101
2	950-JE-01102
3	950-JE-03102
4	950-JE-04101
5	950-JE-04201
6	950-JE-04205
7	950-JE-06101
8	950-JE-06201
9	950-JE-02103

M.C. 12x2x0,75mm^2

	TYPE 1C (AI/AO/DI)
1	00-JE-11002
2	00-JE-11004
3	00-JE-12005
4	00-JE-21001

M.C. 2x(12x2x0,75mm^2)

	TYPE 1D (AI/AO/DI)
1	00-JE-11001
2	00-JE-11003
3	00-JE-12001
4	00-JE-12004
5	00-JE-12006
6	00-JE-22001
7	00-JE-22002

M.C. 12x3x2,5mm^2

	TYPE 1E (AI)
1	950-JE-02101
2	950-JE-02102
3	950-JE-03101
4	950-JE-05101

M.C. 12x2,5mm^2

	TYPE 2A (DO)
1	00-JE-13003
2	00-JE-23002
3	950-JE-01104
4	950-JE-02104
5	950-JE-03104
6	950-JE-04103
7	950-JE-04203
8	950-JE-05103
9	950-JE-06103
10	950-JE-06203
11	950-JE-07101

M.C. 24x2,5mm^2

	TYPE 2B (DO)
1	00-JE-13001
2	00-JE-13002
3	00-JE-23001
4	950-JE-04207

Intrinsecally Safe type

M.C. 6x2x0,75mm^2

	TYPE 3A (DI) (1 M25 + 6 M20)
1	950-JE-04204
2	950-JE-04208
3	950-JE-06204

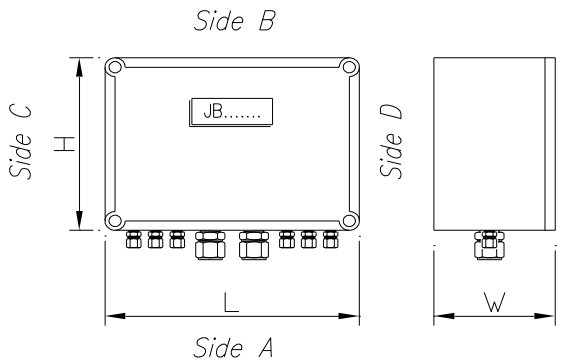
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Q.TY	ITEM	MANUFACTURER	MODEL
7 (1)	*Refer to page 5*	**CORTEM**	**CTB484820S1/C2402708/60**

CABLE ENTRIES: 2 M25 + 24 M20 (1) (2)

TYPE - 1D

Drawing



Gland Plate dimensions: VTA

Electrical Construction	☑ Ex-e	☐ Ex-i	GR. IIC	Temp. Class T6	
Certificate ATEX	N°	VTA	Standard		
Ingress Protection	☐ IP55	☑ IP66	Mounting	**HORIZONTAL**	
Threads according to Standard	☐ ISO 7/1 Rc	☐ UNI 6125	☑ METRIC	☐ None	
External Colour	☐ Grey RAL 9006	☐ Blue RAL 5015	☑ Electropolished		
Internal Colour	☐ Orange RAL 2004		☑ Standard Manufacturer		
Material — Enclosure	☐ Aluminum	☑ AISI 316L	☐ Cast Iron	☐	
Material — Internal/external Screw	☑ Stanless Steel A4		☐		
Material — Internal Bottom Plate	☑ Stanless Steel		☐		
Material — Name Plate	☑ Plastic		☐		
Options — Earthing Stud	☑ Internal	☑ External	Internal Shields Bar	☐ Insulated	
Options — Cover with Hinge	☐ Yes	☑ No	Internal Shields Bar	☐ Not Insulated	
Options — Drain Valve	☑ Yes	☐ No	Brathing Valve	☑ Yes	☐ No

Dimensions			Thickness			Electrical Connection	Terminal Quantity
L	VTA	mm	Wall	VTA	mm	☑ By Strip	**80**
H	VTA	mm	End Plate	VTA	mm		
W	VTA	mm	Cover	VTA	mm		Terminals No.
Name Plate	Dimension (LxH)			VTA	mm	☐	TB-1: 1, 2, SH, 3, 4, SH, … 23, 24, SH, OS, OS, OS, OS
	Engraved Charapters Height			10	mm		TB-2: 25, 26, SH, 27, 28, SH, … 47, 48, SH, OS, OS, OS, OS

Type				
Type	☐ Unloosening	☑ Size 2,5 mm2		
Material	☑ Thermoplastic	☐ Thermosetting		
Colour	☑ Std Manufac.	☐ Blue Ex-i		
Mounting On	☐ "C" Bar according to std. EN-50035			
	☑ "Ω" Bar according to std. EN-50022			
Arrangement	☐ Single Row	☑ Double Column		

Side	Hole Dimensions				Cable Glands ☐ Ex-e/d		Conduit Seals		Plugs (SS316 Ex-e)		Type of cable				
	Threaded		Unthreaded								Armoured	Unarmoured	Formation	External Diameter	Diameter Under Armour
	Q.ty	Size	Q.ty	Size	Q.ty	Size	Q.ty	Size	Q.ty	Size					
A	/	/	2	M25 (1)	/	/	/	/	/	/	☐	☐	/	/	/
	/	/	24	M20 (2)	/	/	/	/	/	/	☐	☐	/	/	/
	/	/	1 (1)	M32 (1)	/	/	/	/	/	/	☐	☐	/	/	/
B											☐	☐			
											☐	☐			
											☐	☐			
C											☐	☐			
											☐	☐			
											☐	☐			
D											☐	☑			
											☐	☐			
											☐	☐			

1) For 00-JE-22001 and 00-JE-22002 only, Multicore cables entry will be n.2 M32 instead of n.2 M25

2) For 00-JE-22001 only, secondary cable entry will be n.6 M25 + n.18 M20

For 00-JE-22002 only, secondary cable entry will be n.4 M25 + n.20 M20

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ROSETTI MARINO — CROSSWIND

ITEM	Tag	00-JE-12006_1/B400-PCS-002	:	DI JB TO PCS / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	87-10-11	:	Junction Box 00-JE-12006 and Multi-core cable (PCS System)	Module	LD_B-100/LD_B-400	
TASK	code	C10002246	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity	CCK	Discipline	Instrumental	Form	CJX10	Multi/Single-Core Instrument Control Cable

CABLE DATA

Type	Cu-XLPE-IS-OS-LSZH-SWB-LSZH	Cores/Size mm²	12X2X0,75 mm2	Color	GREY
From	00-JE-12006	To	B400-PCS-002		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	PL
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	2,5	Ω
	SCREEN	2,4	Ω
	EARTH	NA	Ω
	ARMr	2,5	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

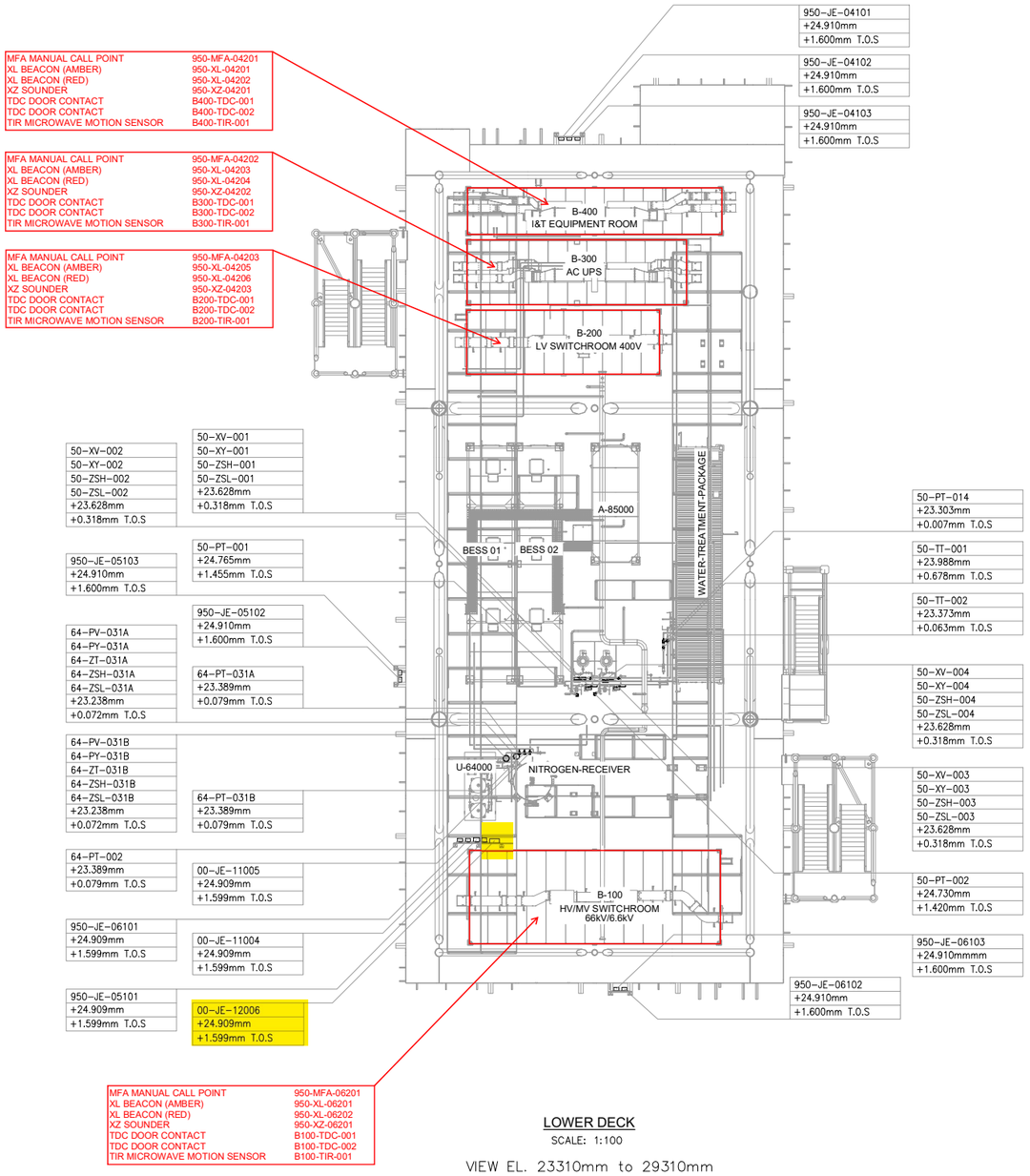
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments Note 5 : Refer to PL: C30000679 / C30000680 / C30000681 / C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-25	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:37:38.252Z	Digitaly signed by Giovanni Tangianu 2024-11-25T08:16:44.891Z	

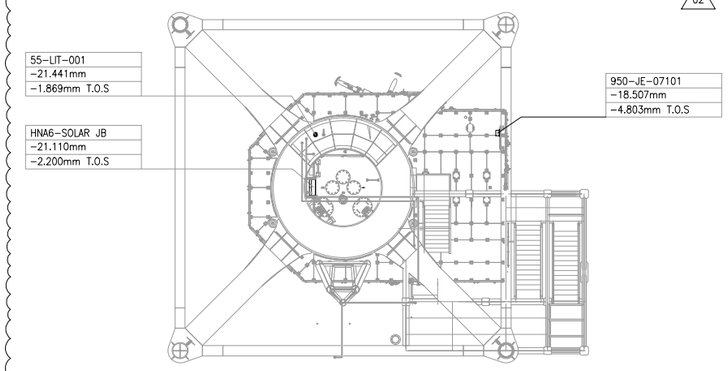
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

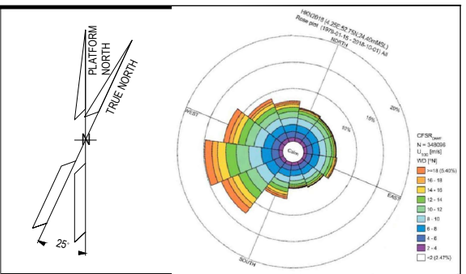


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



TRANSITION PIECE
SCALE: 1:100
VIEW EL. 17050mm to 23310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40080**

REV.:	DATE:	SIGNATURE:
2_B	16/10/24	G.Randi

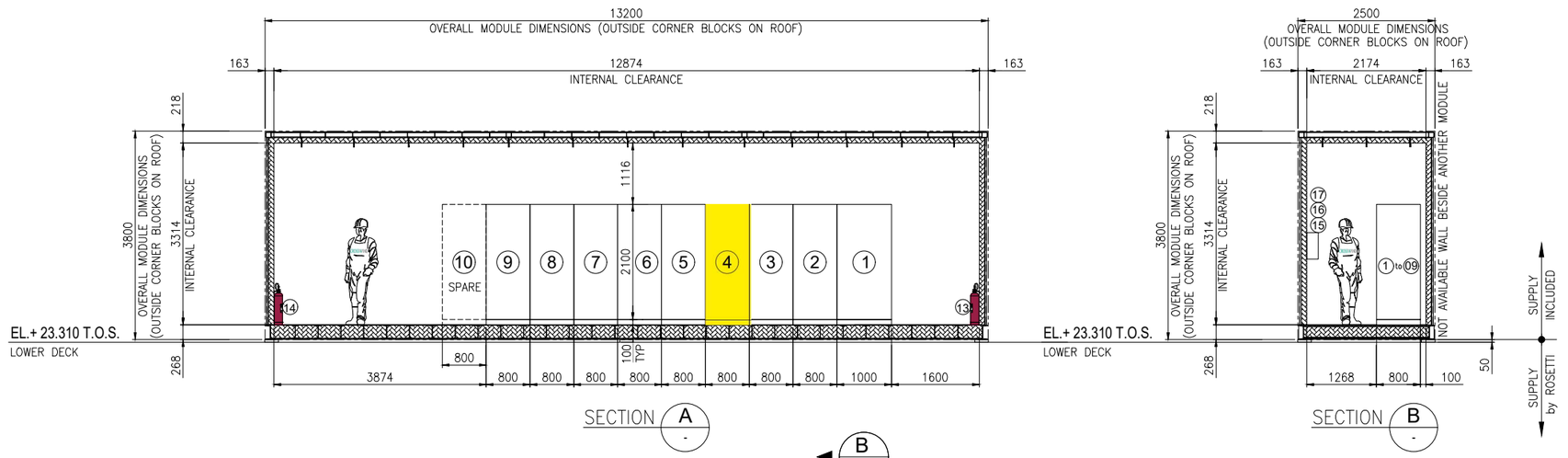
ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40080	SHEET 001	REV. 02

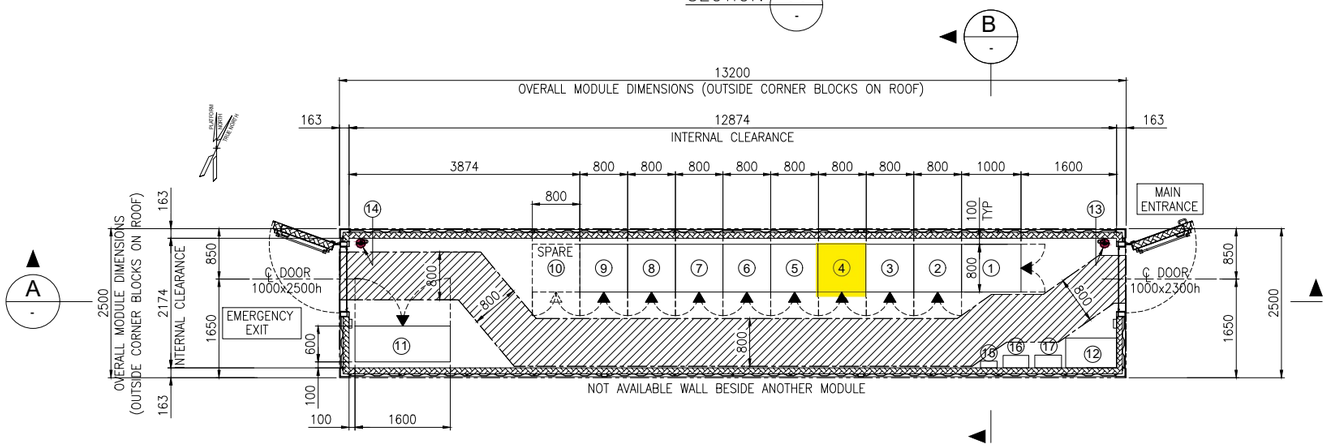
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DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -

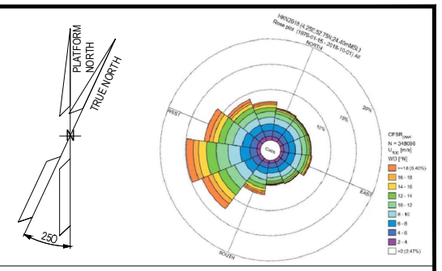
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

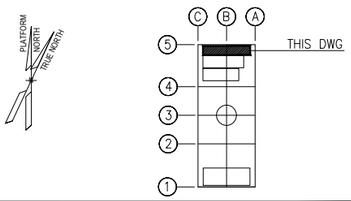
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>

ON-OFF VALVE LIMIT SWITCHES BOX (SOLDO)
- 50-ZSL-001 (1, 2) WH BK → PR1
- 50-ZSH-001 (5, 6) WH BK → PR2
- NOTE-2
- C-50-XV-001/00-JE-12006
  2x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

ON-OFF VALVE LIMIT SWITCHES BOX (SOLDO)
- 50-ZSL-002 (1, 2) WH BK → PR1
- 50-ZSH-002 (5, 6) WH BK → PR2
- NOTE-2
- C-50-XV-002/00-JE-12006
  2x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

ON-OFF VALVE LIMIT SWITCHES BOX (SOLDO)
- 50-ZSL-003 (1, 2) WH BK → PR1
- 50-ZSH-003 (5, 6) WH BK → PR2
- NOTE-2
- C-50-XV-003/00-JE-12006
  2x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

ON-OFF VALVE LIMIT SWITCHES BOX (SOLDO)
- 50-ZSL-004 (1, 2) WH BK → PR1
- 50-ZSH-004 (5, 6) WH BK → PR2
- NOTE-2
- C-50-XV-004/00-JE-12006
  2x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

ON-OFF VALVE LIMIT SWITCHES BOX (SOLDO)
- 50-ZSL-005 (1, 2) WH BK → PR1
- 50-ZSH-005 (5, 6) WH BK → PR2
- NOTE-2
- C-50-XV-005/00-JE-12006
  2x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-1

WH BK	1	WH BK	PR1
	2		
	SH		
WH BK	3	WH BK	PR2
	4		
	SH		
WH BK	5	WH BK	PR3
	6		
	SH		
WH BK	7	WH BK	PR4
	8		
	SH		
WH BK	9	WH BK	PR5
	10		
	SH		
WH BK	11	WH BK	PR6
	12		
	SH		
WH BK	13	WH BK	PR7
	14		
	SH		
WH BK	15	WH BK	PR8
	16		
	SH		
WH BK	17	WH BK	PR9
	18		
	SH		
WH BK	19	WH BK	PR10
	20		
	SH		
SPARE	21	WH BK	PR11
	22		
	SH		
SPARE	23	WH BK	PR12
	24		
	SH		
	OS		

00-JE-12006_1/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1 WH BK	1	50-ZSL-001
Shield Bar	2	
PR2 WH BK	3	50-ZSH-001
Shield Bar	4	
PR3 WH BK	5	50-ZSL-002
Shield Bar	6	
PR4 WH BK	7	50-ZSH-002
Shield Bar	8	
PR5 WH BK	9	50-ZSL-003
Shield Bar	10	
PR6 WH BK	11	50-ZSH-003
Shield Bar	12	
PR7 WH BK	13	50-ZSL-004
Shield Bar	14	
PR8 WH BK	15	50-ZSH-004
Shield Bar	16	
PR9 WH BK	17	50-ZSL-005
Shield Bar	18	
PR10 WH BK	19	50-ZSH-005
Shield Bar	20	
PR11 WH BK	21	SPARE
Shield Bar	22	
PR12 WH BK	23	SPARE
	24	

Shield Bar
I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00–JE–12006–SH.1 OF 2

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–IN–DG–40015	022	01

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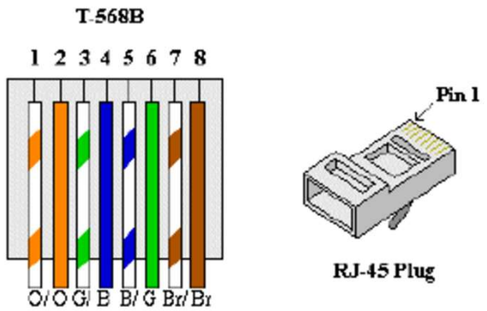
REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. SWITCH TAG NAME AND PORT WILL BE DEFINED DURING THE CONSTRUCTION PHASE
6. FIBER OPTIC TAG NAME WILL BE DEFINED DURING THE CONSTRUCTION PHASE.

<01>

7. CAT. 6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



RJ-45 Plug

8. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   01) RED
   02) GREEN
   03) BLUE
   04) YELLOW
   05) GREY
   06) PURPLE
   07) BROWN
   08) ORANGE
   09) WHITE
   10) PINK
   11) BLACK
   12) TURQUOISE

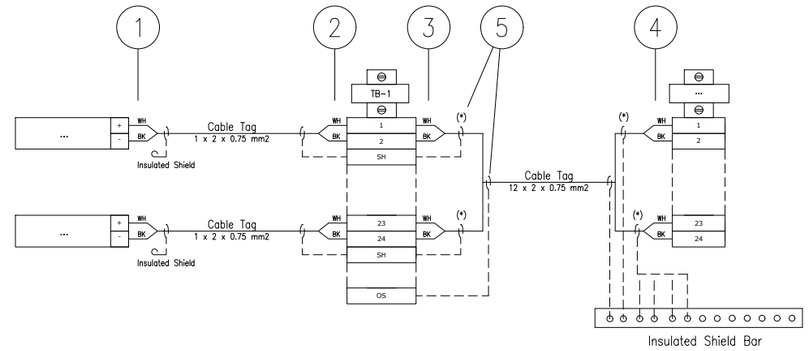
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW —— P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

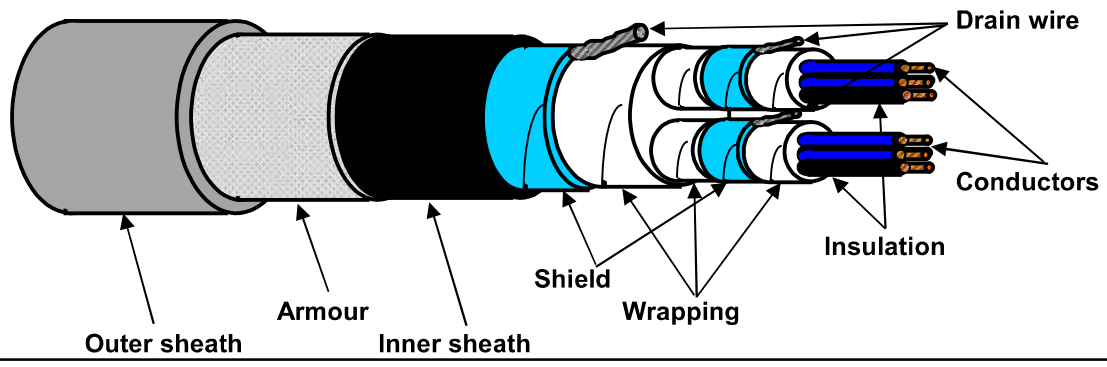
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
00-JE-12006_1/B400-PCS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	B400-PCS-002	Marshalling PCS	Lower Deck (B-400)	SMICV04-12X2X0,75	Cable Cu Cl.2/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 12x2x0,75mm² - Grey	M25	T2_M25_Double			n.a.				L-SEC-16 / L-SEC-1M / L-SEC-1L / L-SEC-1J / L-SEC-1I / L-SEC-1H / L-SEC-1G / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / B-400-SEC-1B / I-MCT-401

FLEI s.r.l.

Cu Cl.2/XLPE/IS/OS/LSZH/SWB/LSZH 150/250 V (300 V)

12X2X0,75 - INSTRUMENT CABLE - Flame Retardant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	XLPE, Nominal Thickness 0,5 mm	
Cores colour code :	**White - Black (each core NUMBERED for PAIR identification)**	
Pair Assembling :	13/1mt	
Pair Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Pair Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Total Assembling :	3/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,5 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,7 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) : (every 1000 mm)	**FLEI - 12X2X0,75 SQMM - XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(20,2 ± 10%) mm	
Over armour diameter :	(21,4 ± 10%) mm	
Outer diameter :	(24,8 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C)	(max continuous operation temperature of conductors)
	(max +250°C)	(max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C)	(in fixed installation)
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	00-JE-12006_2/B400-PCS-002	: DI JB TO PCS / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	87-10-11	: Junction Box 00-JE-12006 and Multi-core cable (PCS System)		Module	LD_B-100/LD_B-400	
TASK	code	C10002247	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX10	Multi/Single-Core Instrument Control Cable

CABLE DATA

Type	Cu-XLPE-IS-OS-LSZH-SWB-LSZH	Cores/Size mm²	12X2X0,75 mm2	Color	GREY
From	00-JE-12006	To	B400-PCS-002		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	PL
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	OK
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	2,5	Ω
	SCREEN	2,5	Ω
	EARTH	NA	Ω
	ARMr	2,5	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

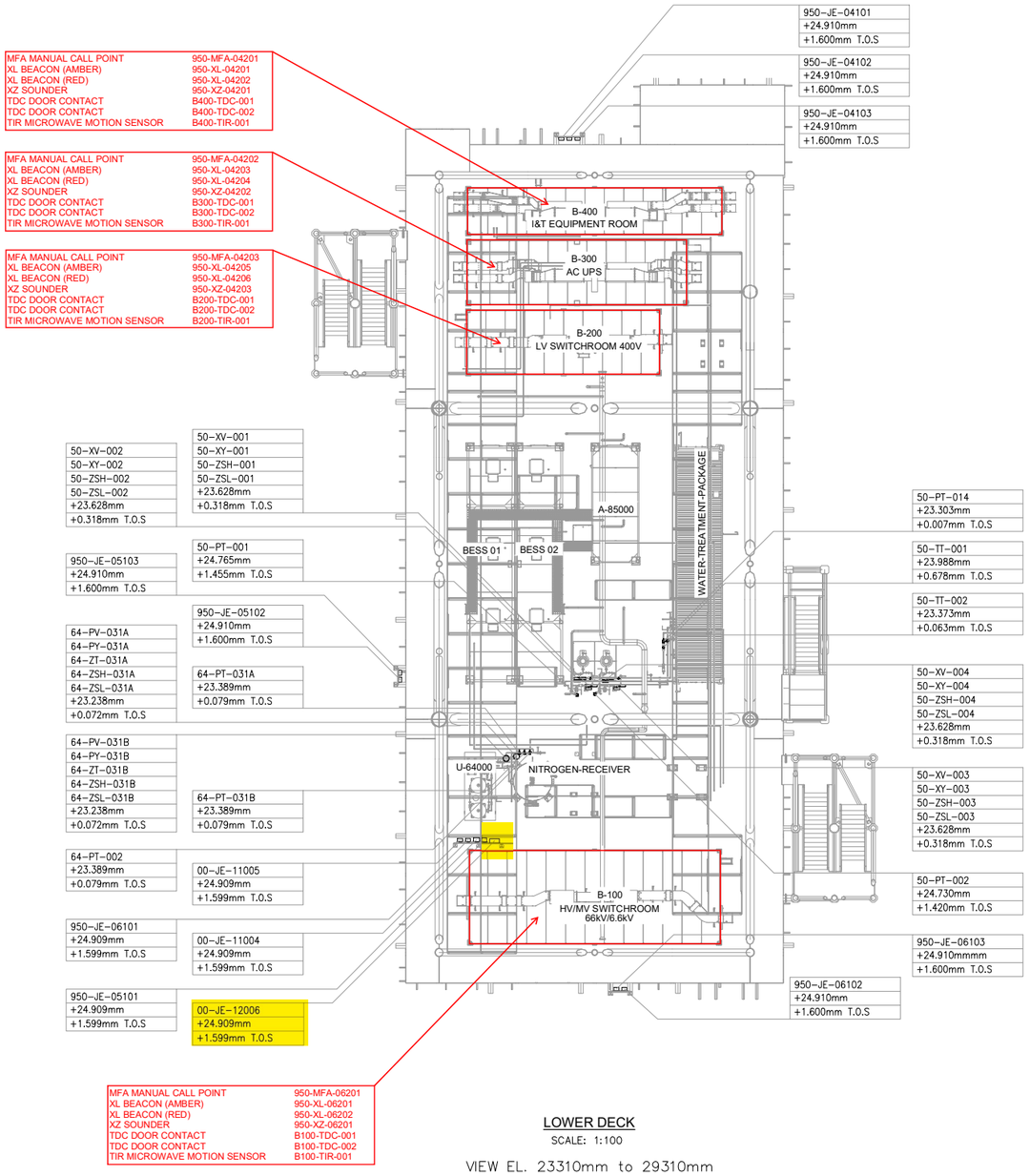
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments Note 5 : Refer to PL: C30000679 / C30000680 / C30000681 / C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-25	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:37:49.337Z	Digitaly signed by Giovanni Tangianu 2024-11-25T07:54:43.895Z	

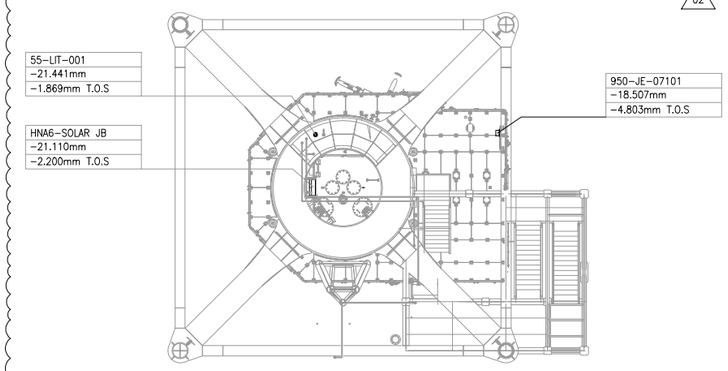
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

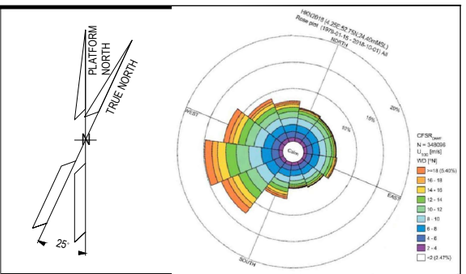


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



TRANSITION PIECE
SCALE: 1:100
VIEW EL. 17050mm to 23310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40080**

REV.:	DATE:	SIGNATURE:
2_B	16/10/24	G.Randi

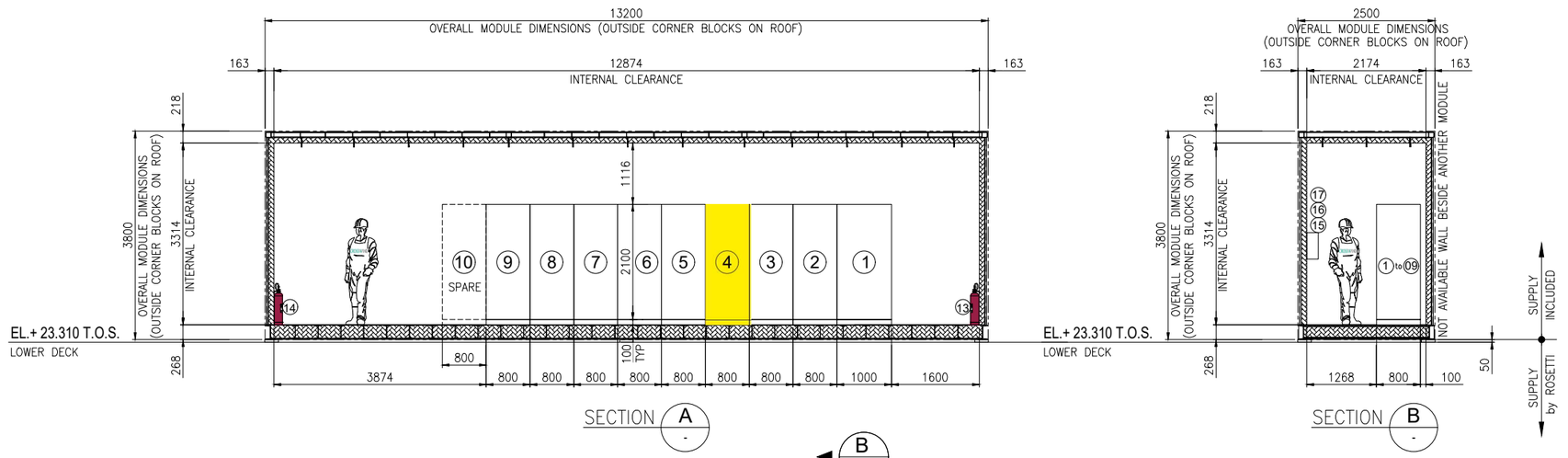
ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40080	SHEET 001	REV. 02

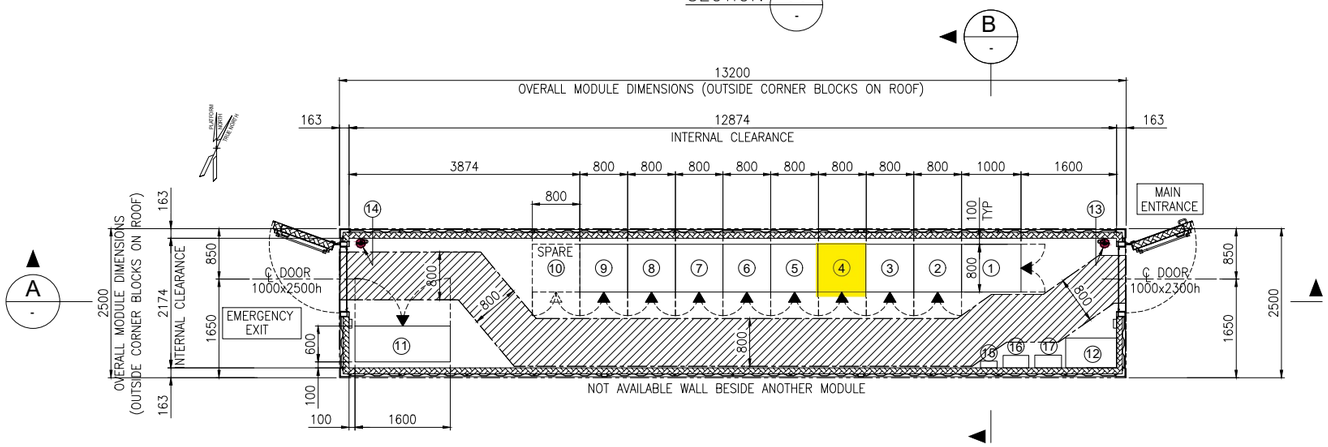
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DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -

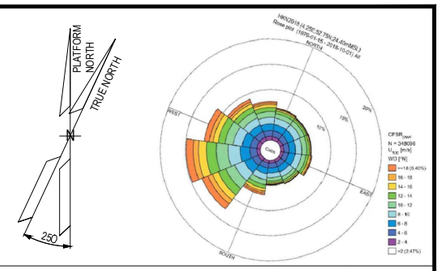
SECTION B -



EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	B400-SRV-001	SERVER CABINET	1000	800	2100	
2	B400-NET-001	NETWORK CABINET	800	800	2100	
3	B400-EMCS-001	EMCS SYSTEM CABINET	800	800	2100	
4	B400-PCS-002	PCS MARSHALLING CABINET	800	800	2100	
5	B400-PCS-001	PCS SYSTEM CABINET 03	800	800	2100	
6	B400-FGS-003	FGS MARSHALLING CABINET 2	800	800	2100	
7	B400-FGS-002	FGS MARSHALLING CABINET 1	800	800	2100	
8	B400-FGS-001	FGS SYSTEM CABINET	800	800	2100	
9	B400-SIS-001	SIS SYSTEM/MARSHALLING CABINET	800	800	2100	
10	-	SPARE				
11	B400-HSB-001	DISTRIBUTION & HVAC PANEL - I&T ROOM	1600	600	2300	
12	-	TABLE	850	500	750	
13	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
14	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	
15	-	FIRST AID KIT	280	115	200	
16	-	RESUSCITATION UNIT	430	210	480	
17	-	CABINET INCLUDED N.10 ESCAPE MASK	448	213	422	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

LEGEND

U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ EQUIPMENT ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

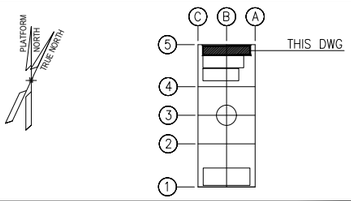
HOLDS

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REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
Control System Architecture Detailed Drawings	123A90-DDL-IN-DD-40096
Data Network Architecture Drawings	123A90-DDL-IN-DD-40019
Earthing layouts drawings (CCR, ITER)	123A90-DDL-IN-DL-40013
Instrument and Telecom MCT Layout – Lower Deck	123A90-DDL-IN-DL-40086
"B-400" I&T Equipment Room – Architectural Layout	123A90-DDL-AR-DL-10015
"B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10015
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00017
"B-400" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DD-00021
"B-400" HVAC SYSTEM G.A. and DETAILS	1724000049-HV-DA-00067

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	27/05/24	MGA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	22/01/24	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)
00	07/11/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND — ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40012**

REV.:	DATE:	SIGNATURE:
3_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:33,3
DRAWN MGA	CHECKED LCA	APPROVED DLO	DATE 27/05/24
A1	DRAWING NO. 123A90-DDL-IN-DL-40012	SHEET 001	REV. 03

File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH/BK — NOTE-2

64-ZSH-031A (5, 6) WH/BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH/BK — NOTE-2

64-ZSH-031B (5, 6) WH/BK — NOTE-2

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

WH/BK	25	WH/BK	PR1
	26		
	SH		
WH/BK	27	WH/BK	PR2
	28		
	SH		
WH/BK	29	WH/BK	PR3
	30		
	SH		
WH/BK	31	WH/BK	PR4
	32		
	SH		
SPARE	33	WH/BK	PR5
	34		
	SH		
SPARE	35	WH/BK	PR6
	36		
	SH		
SPARE	37	WH/BK	PR7
	38		
	SH		
SPARE	39	WH/BK	PR8
	40		
	SH		
SPARE	41	WH/BK	PR9
	42		
	SH		
SPARE	43	WH/BK	PR10
	44		
	SH		
SPARE	45	WH/BK	PR11
	46		
	SH		
SPARE	47	WH/BK	PR12
	48		
	SH		
	OS		

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1 WH/BK	25	64-ZSL-031A
Shield Bar	26	
PR2 WH/BK	27	64-ZSH-031A
Shield Bar	28	
PR3 WH/BK	29	64-ZSL-031B
Shield Bar	30	
PR4 WH/BK	31	64-ZSH-031B
Shield Bar	32	
PR5 WH/BK	33	SPARE
Shield Bar	34	
PR6 WH/BK	35	SPARE
Shield Bar	36	
PR7 WH/BK	37	SPARE
Shield Bar	38	
PR8 WH/BK	39	SPARE
Shield Bar	40	
PR9 WH/BK	41	SPARE
Shield Bar	42	
PR10 WH/BK	43	SPARE
Shield Bar	44	
PR11 WH/BK	45	SPARE
Shield Bar	46	
PR12 WH/BK	47	SPARE
	48	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-12006-SH.2 OF 2

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 023	REV. 01

File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

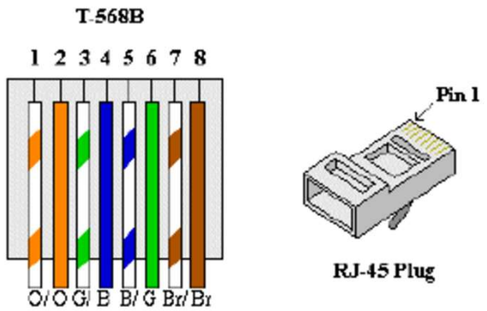
REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. SWITCH TAG NAME AND PORT WILL BE DEFINED DURING THE CONSTRUCTION PHASE
6. FIBER OPTIC TAG NAME WILL BE DEFINED DURING THE CONSTRUCTION PHASE.

<01>

7. CAT. 6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



RJ-45 Plug

8. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   01) RED
   02) GREEN
   03) BLUE
   04) YELLOW
   05) GREY
   06) PURPLE
   07) BROWN
   08) ORANGE
   09) WHITE
   10) PINK
   11) BLACK
   12) TURQUOISE

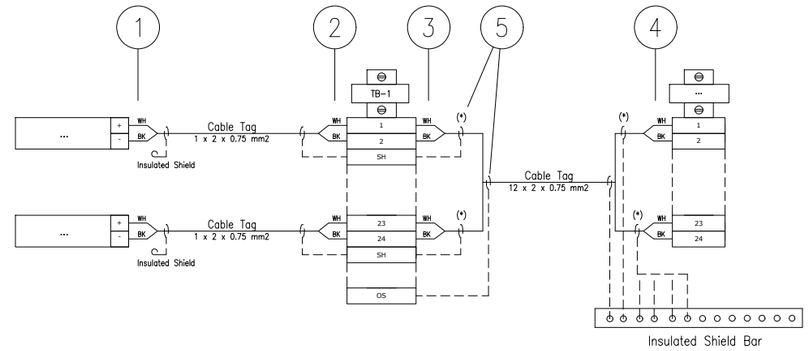
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW —— P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_E	19/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

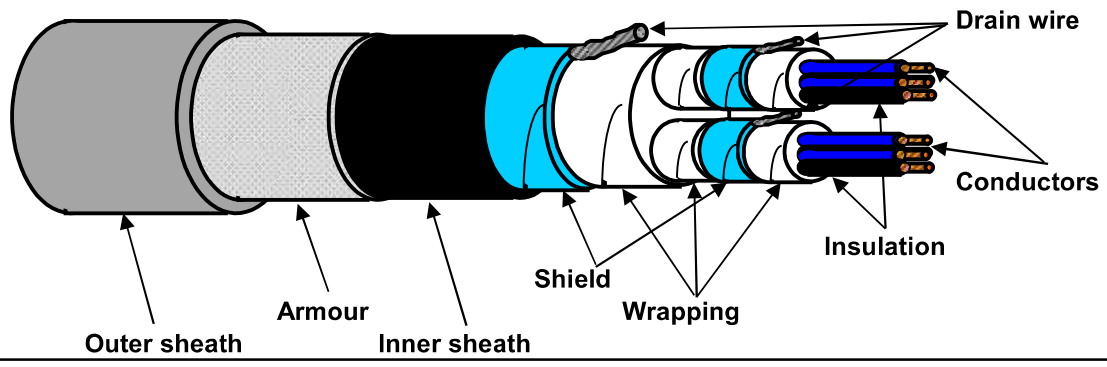
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
00-JE-12006_2/B400-PCS-002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	B400-PCS-002	Marshalling PCS	Lower Deck (B-400)	SMICV04-12X2X0,75	Cable Cu Cl.2/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 12x2x0,75mm² - Grey	M25	T2_M25_Double			n.a.				L-SEC-16 / L-SEC-1M / L-SEC-1L / L-SEC-1J / L-SEC-1I / L-SEC-1H / L-SEC-1G / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / B-400-SEC-1B / I-MCT-401

FLEI s.r.l.

Cu Cl.2/XLPE/IS/OS/LSZH/SWB/LSZH 150/250 V (300 V)

12X2X0,75 - INSTRUMENT CABLE - Flame Retardant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	XLPE, Nominal Thickness 0,5 mm	
Cores colour code :	**White - Black (each core NUMBERED for PAIR identification)**	
Pair Assembling :	13/1mt	
Pair Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Pair Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Total Assembling :	3/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,5 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,7 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) : (every 1000 mm)	**FLEI - 12X2X0,75 SQMM - XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(20,2 ± 10%) mm	
Over armour diameter :	(21,4 ± 10%) mm	
Outer diameter :	(24,8 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C)	(max continuous operation temperature of conductors)
	(max +250°C)	(max conductors temperature during short-circuit for 5 seconds)
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C)	(in fixed installation)
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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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