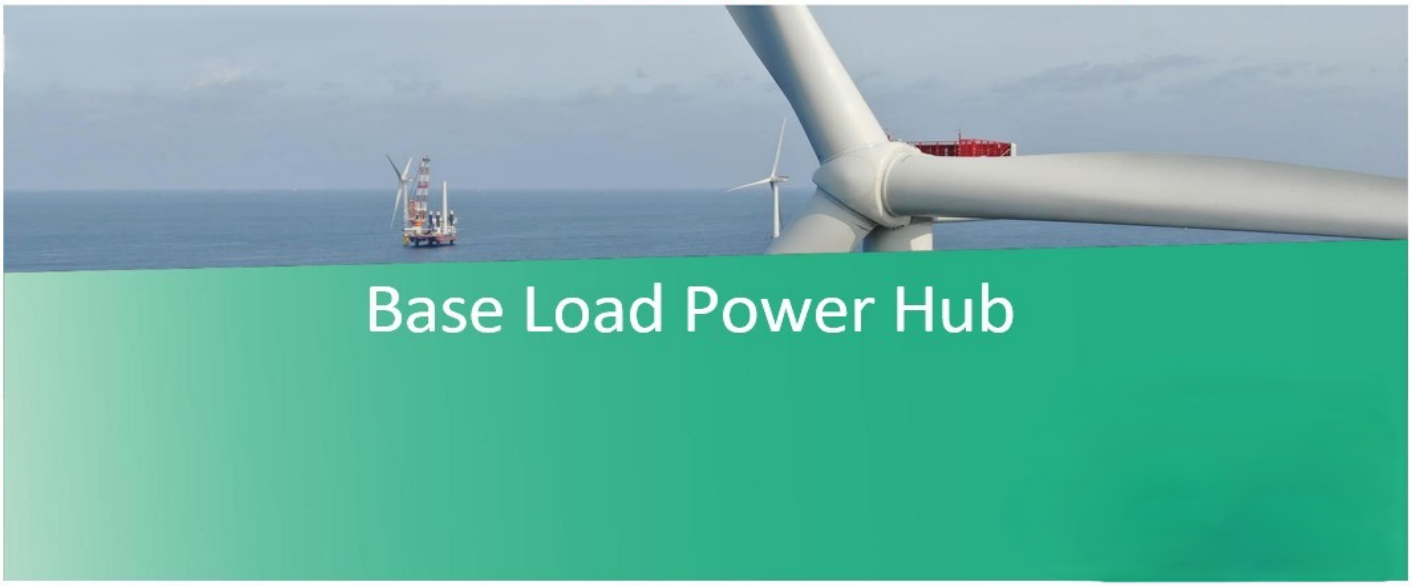
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM

70
Safety and Facility Systems

SUBSYSTEM

70-00-04

Junction Box 950-JE-02101 and Multi-core cable (FGS System)

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

Sub System N°:	70-00-04	Tick as appropriate	ONSHORE	O
Description:	Junction Box 950-JE-02101 and Multi-core cable (FGS 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*	O
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:	2025-01-11	
System:	70	/	Safety and Facility Systems		
SubSystem:	70-00-04	/	Junction Box 950-JE-02101 and Multi-core cable (FGS 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	B
	'0	9

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	2025-01-24	2025-01-24	2025-01-24	2025-01-24
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-01-24T11:58:46.723Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-01-24T14:14:48.213Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-24T14:24:44.415Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-24T14:24:55.012Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-04 & process: MC

Instrumental	70-00-04 Junction Box 950-JE-02101 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	ONSHORE	C10002152	CJX10	100	2025-01-09	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-04 & process: MC

ATEX	70-00-04 Junction Box 950-JE-02101 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-02101	AI JB TO FGS	ONSHORE	C10002151	CJX01	100	2025-01-09	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 70 Safety and Facility Systems

SUBSYSTEM 70-00-04 Junction Box 950-JE-02101 and Multi-core cable (FGS System)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002517	A	950-JE-02101 C10002151	Earthing cable outside the JB is not properly terminated and is not tight. See Attached photo.	.		Gtangianu 2025-01-09	2025-01-11	Ecarotenuto 2025-01-11	2025-01-11
C30002518	B	950-JE-02101 C10002151	Cleaning is required inside the panel. See attached photo.	.		Gtangianu 2025-01-09			
C30002519	B	950-JE-02101 C10002151	Missing certificate plugs inside the JB. See attached photo.	.		Gtangianu 2025-01-09			
C30002520	B	950-JE-02101 C10002151	Missing All growers of the support JB. See attached photo.	.		Gtangianu 2025-01-09			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002537	B	950-JE-02101/B 400-FGS-003 C10002152	Core identification tags are missing on 950-JE-02101 side and are wrong on sideB400-FGS-003 . See attached photo.	.		Gtangianu 2025-01-09			
C30002538	B	950-JE-02101/B 400-FGS-003 C10002152	Missing cable tag side the (950-JE-02101).See attached photo.	.		Gtangianu 2025-01-09			
C30002539	B	950-JE-02101/B 400-FGS-003 C10002152	Cable is outside the cabletray side the 950-JE-02101. See attached photo.	.		Gtangianu 2025-01-09			
C30002540	B	950-JE-02101/B 400-FGS-003 C10002152	Not enought threads are thightened between the lock nut and the cable gland body side (950-JE-02101). See attached photo.	.		Gtangianu 2025-01-09			
C30002541	B	950-JE-02101/B 400-FGS-003 C10002152	Partial shield as not connected on the terminal board. side the (B400-FGS-003). See attached photo.	.		Gtangianu 2025-01-09			
C30002542	B	950-JE-02101/B 400-FGS-003 C10002152	MCT is OPEN on top the panel B400-FGS-003. See attached photo.	.		Gtangianu 2025-01-09			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002517	A	950-JE-02101 C10002151	Earthing cable outside the JB is not properly terminated and is not tight. See Attached photo.	.		Gtangianu 2025-01-09	2025-01-11	Ecarotenuto 2025-01-11	2025-01-11
C30002518	B	950-JE-02101 C10002151	Cleaning is required inside the panel. See attached photo.	.		Gtangianu 2025-01-09	2025-01-25	Lmussi 2025-01-25	2025-01-25
C30002519	B	950-JE-02101 C10002151	Missing certificate plugs inside the JB. See attached photo.	.		Gtangianu 2025-01-09	2025-01-25	Lmussi 2025-01-25	2025-01-25
C30002520	B	950-JE-02101 C10002151	Missing All growers of the support JB. See attached photo.	.		Gtangianu 2025-01-09	2025-01-21	AAndreani 2025-01-21	2025-01-21

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002540	A	950-JE-02101/B400-FGS-003 C10002152	Not enought threads are thightened between the lock nut and the cable gland body side (950-JE-02101). See attached photo.	.		Gtangianu 2025-01-09	2025-01-23	Ecarotenuto 2025-01-23	2025-01-23
C30002537	B	950-JE-02101/B400-FGS-003 C10002152	Core identification tags are missing on 950-JE-02101 side and are wrong on sideB400-FGS-003 . See attached photo.	.		Gtangianu 2025-01-09	2025-02-26	Gtangianu 2025-02-26	2025-02-26
C30002538	B	950-JE-02101/B400-FGS-003 C10002152	Missing cable tag side the (950-JE-02101).See attached photo.	.		Gtangianu 2025-01-09	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30002539	B	950-JE-02101/B400-FGS-003 C10002152	Cable is outside the cabletray side the 950-JE-02101. See attached photo.	.		Gtangianu 2025-01-09	2025-02-26	Pschintu 2025-02-26	2025-02-26
C30002541	B	950-JE-02101/B400-FGS-003 C10002152	Partial shield as not connected on the terminal board. side the (B400-FGS-003). See attached photo.	.		Gtangianu 2025-01-09	2025-02-27	AAndreani 2025-02-27	2025-02-27
C30002542	B	950-JE-02101/B400-FGS-003 C10002152	MCT is OPEN on top the panel B400-FGS-003. See attached photo.	.		Gtangianu 2025-01-09	2025-02-26	Gtangianu 2025-02-26	2025-02-26

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002541

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Partial shield as not connected on the terminal board. side the (B400-FGS-003). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-27

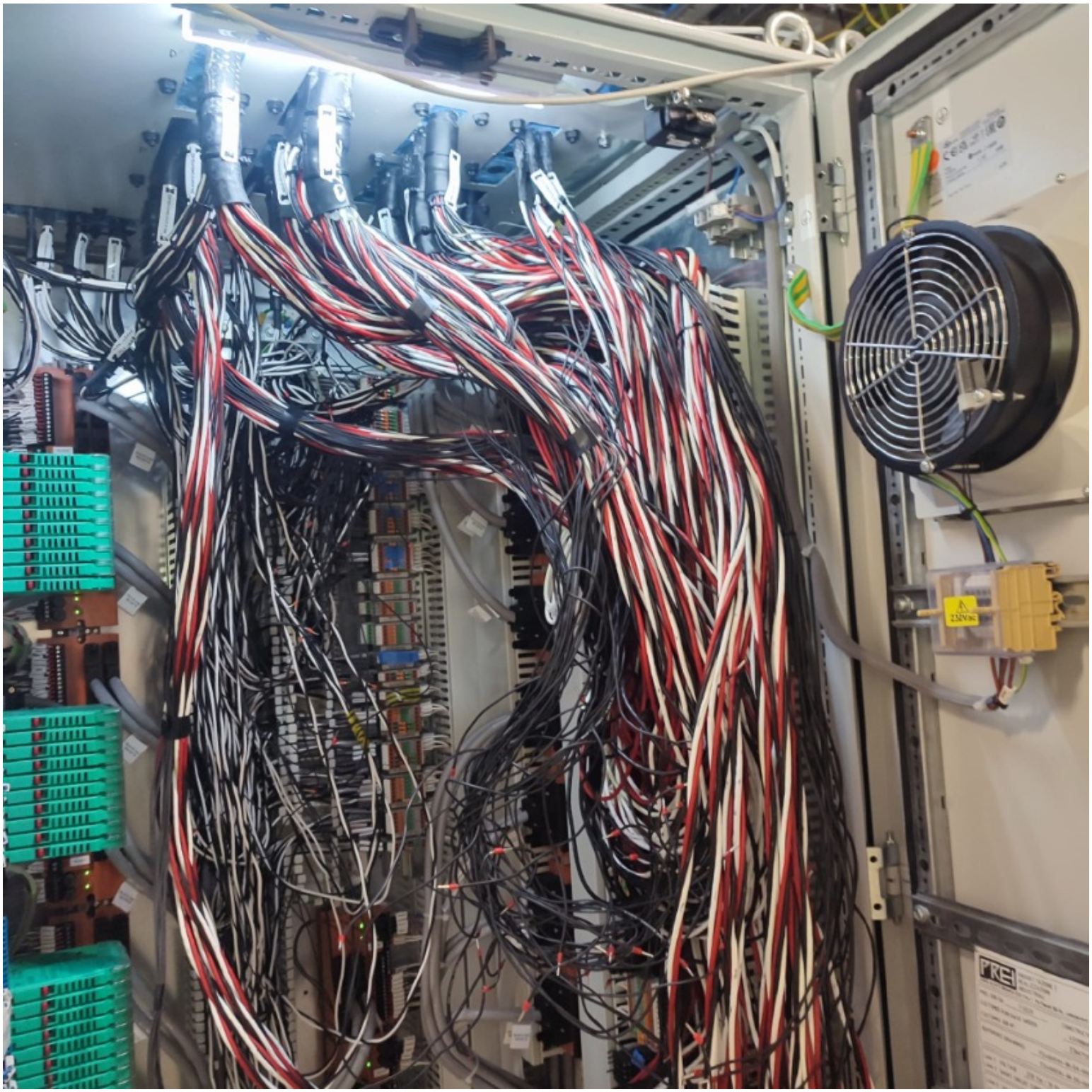
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002542

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

MCT is OPEN on top the panel B400-FGS-003. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

MCT is closed..

Name: Giovanni Tangianu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

950-JE-02101/B400-FGS-003

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002517

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002151	1.4 Discipline	ATEX
1.2 Item	950-JE-02101	AI JB TO FGS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Earthing cable outside the JB is not properly terminated and is not tight.

See Attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto

Date: 2025-01-11

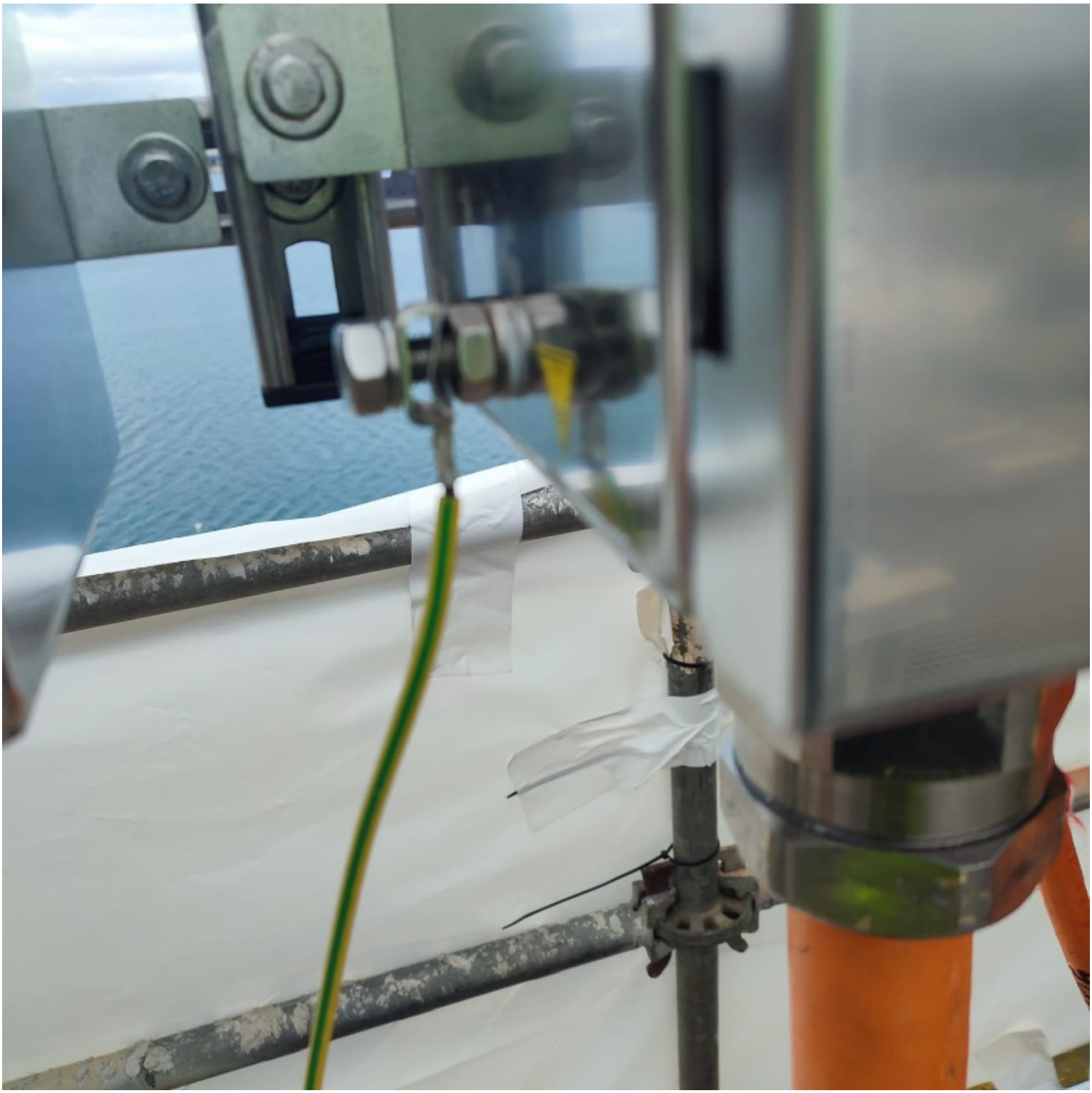
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002518

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002151	1.4 Discipline	ATEX
1.2 Item	950-JE-02101	AI JB TO FGS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Cleaning is required inside the panel. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-01-25

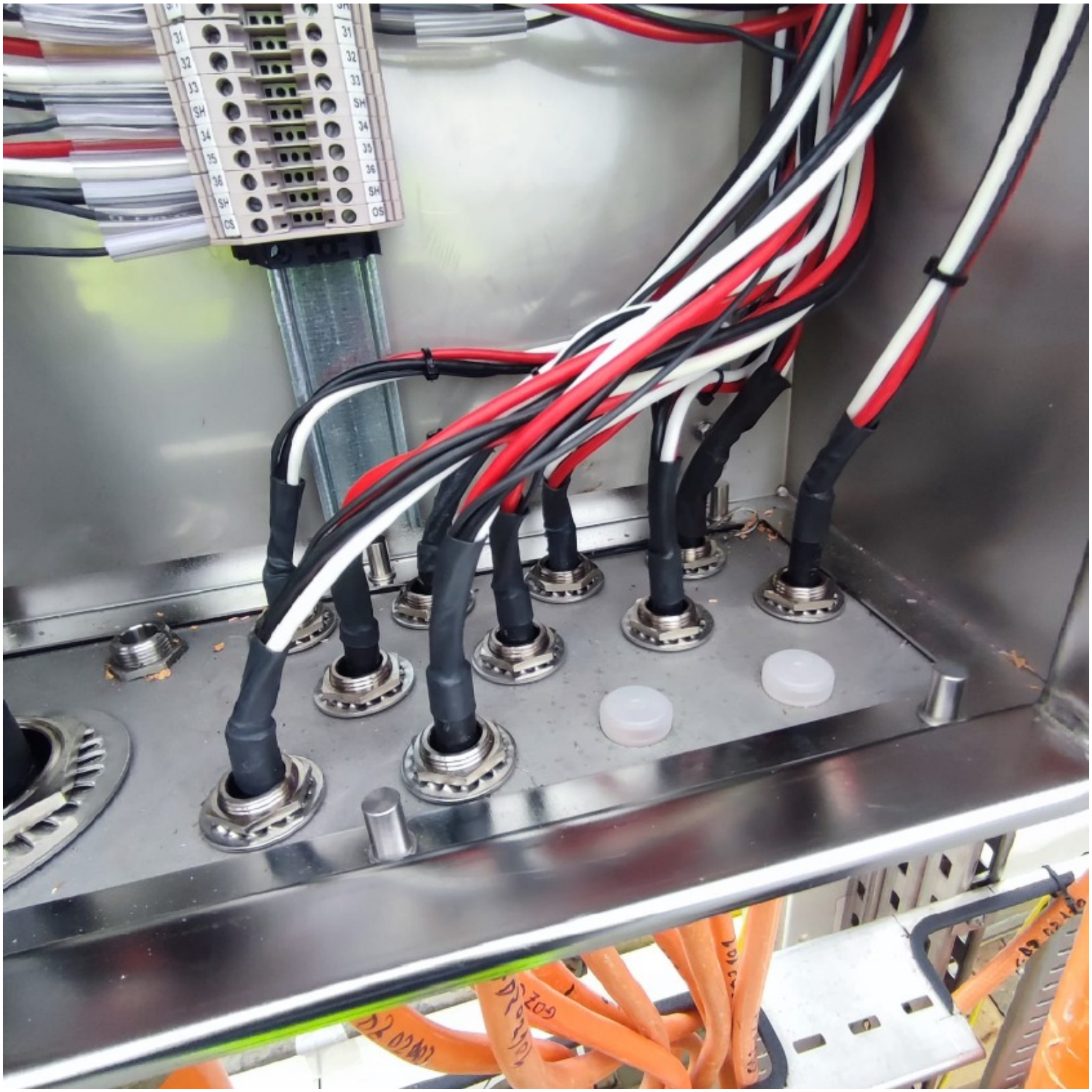
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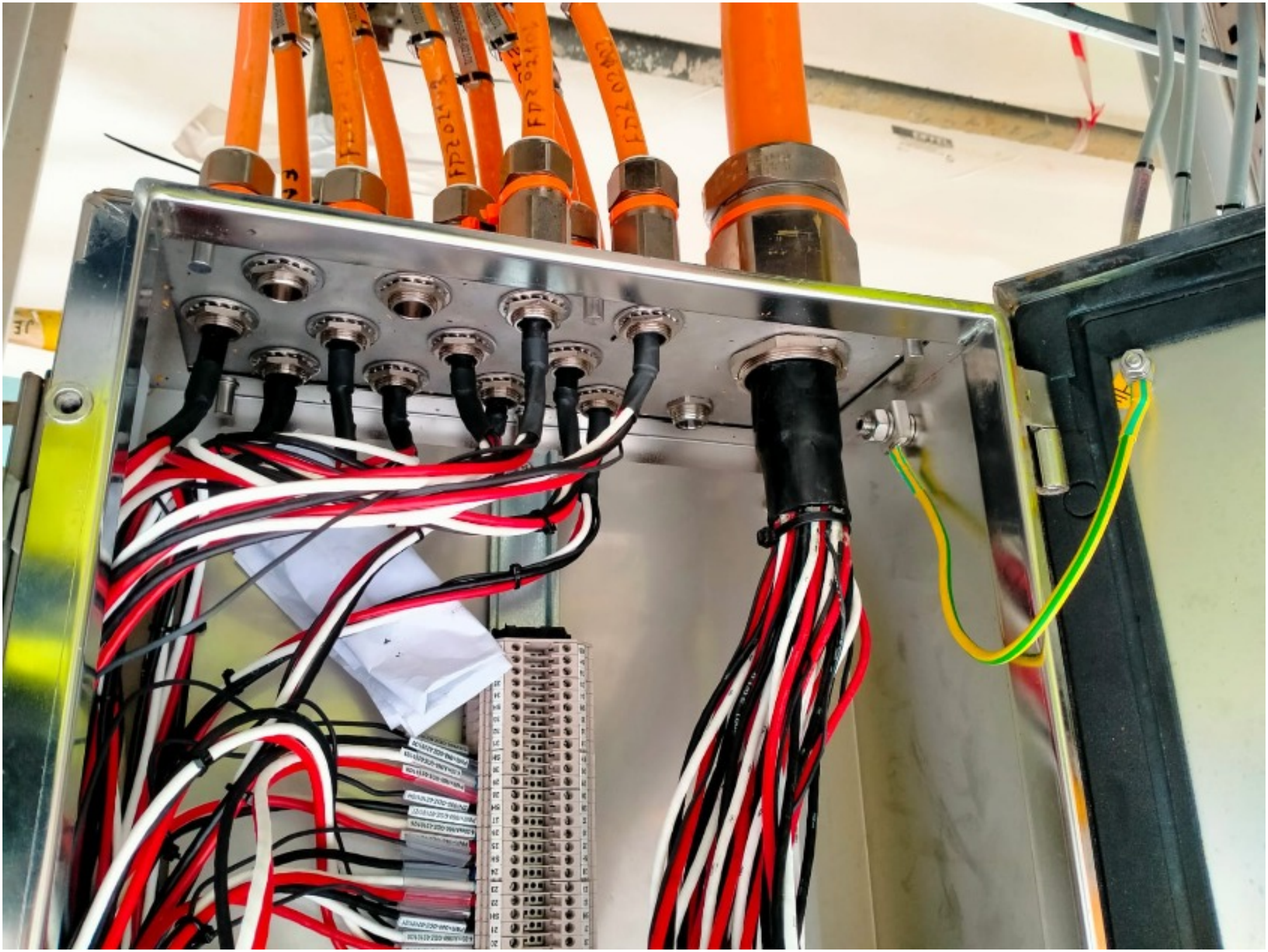
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


J1
J2
J3
SH
J4
J5
J6
SH
OS



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002519

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002151	1.4 Discipline	ATEX
1.2 Item	950-JE-02101	AI JB TO FGS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Missing certificate plugs inside the JB. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-01-25

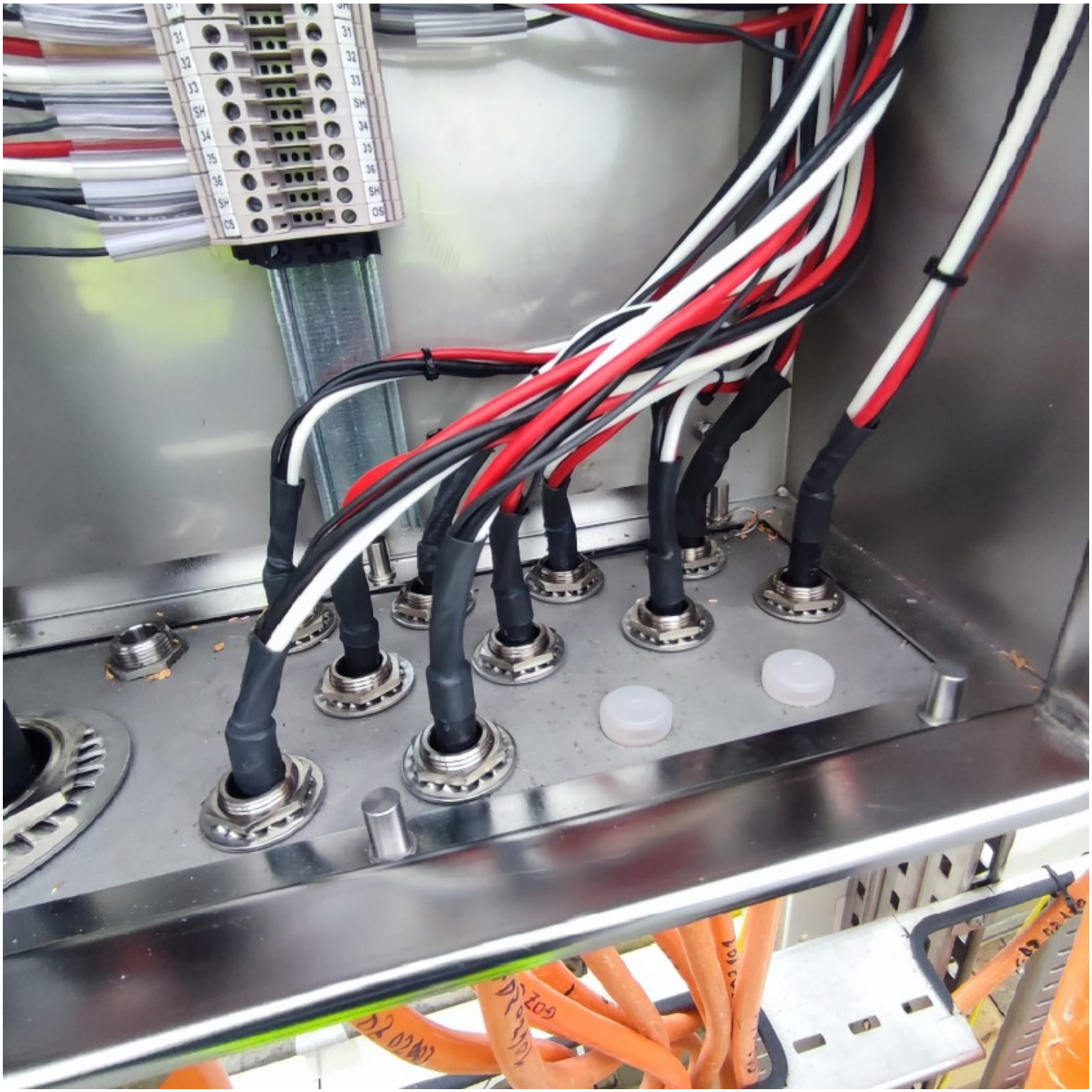
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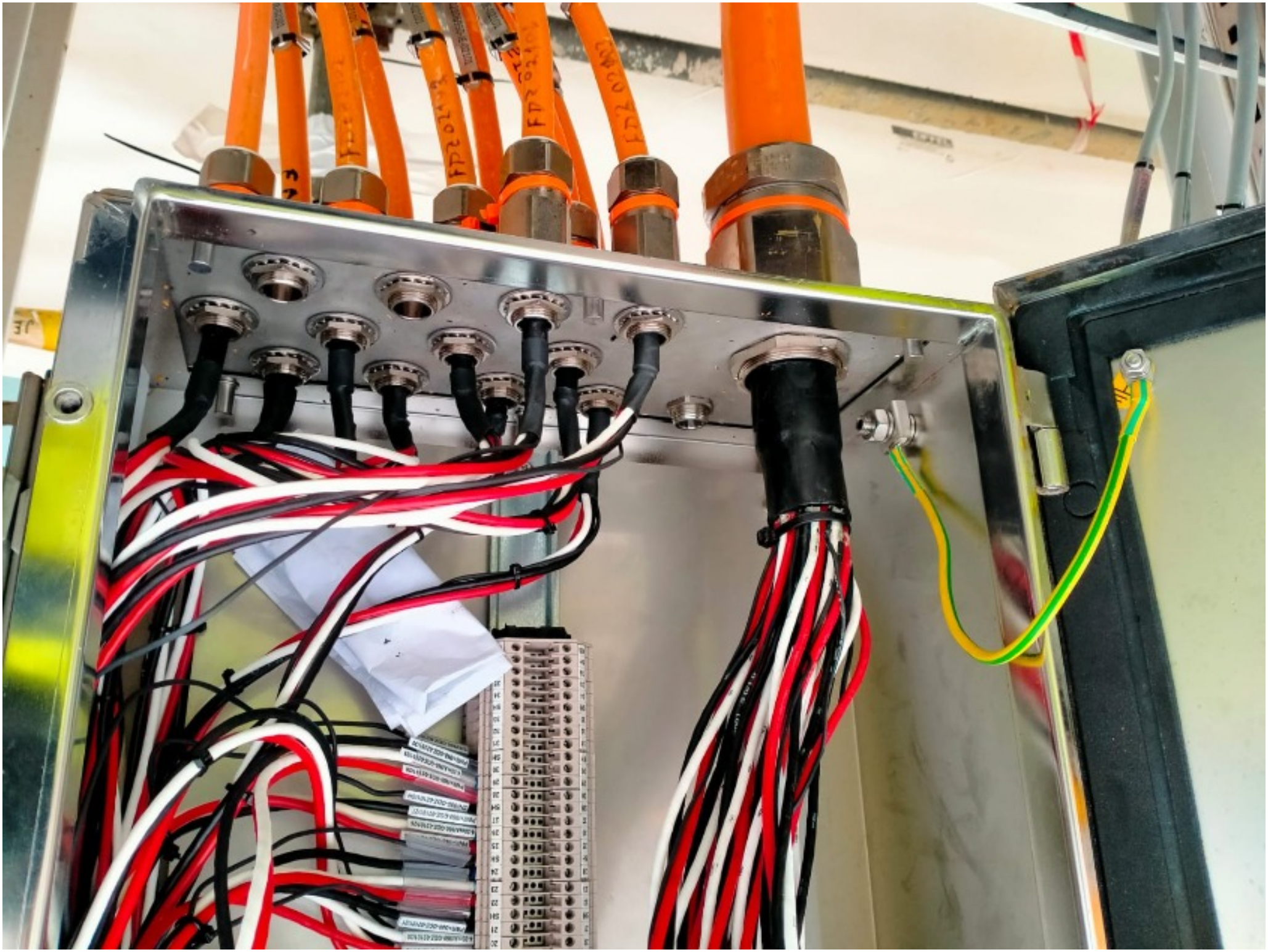
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


J1
J2
J3
SH
J4
J5
J6
SH
OS



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002520

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002151	1.4 Discipline	ATEX
1.2 Item	950-JE-02101	AI JB TO FGS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Missing All growers of the support JB. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

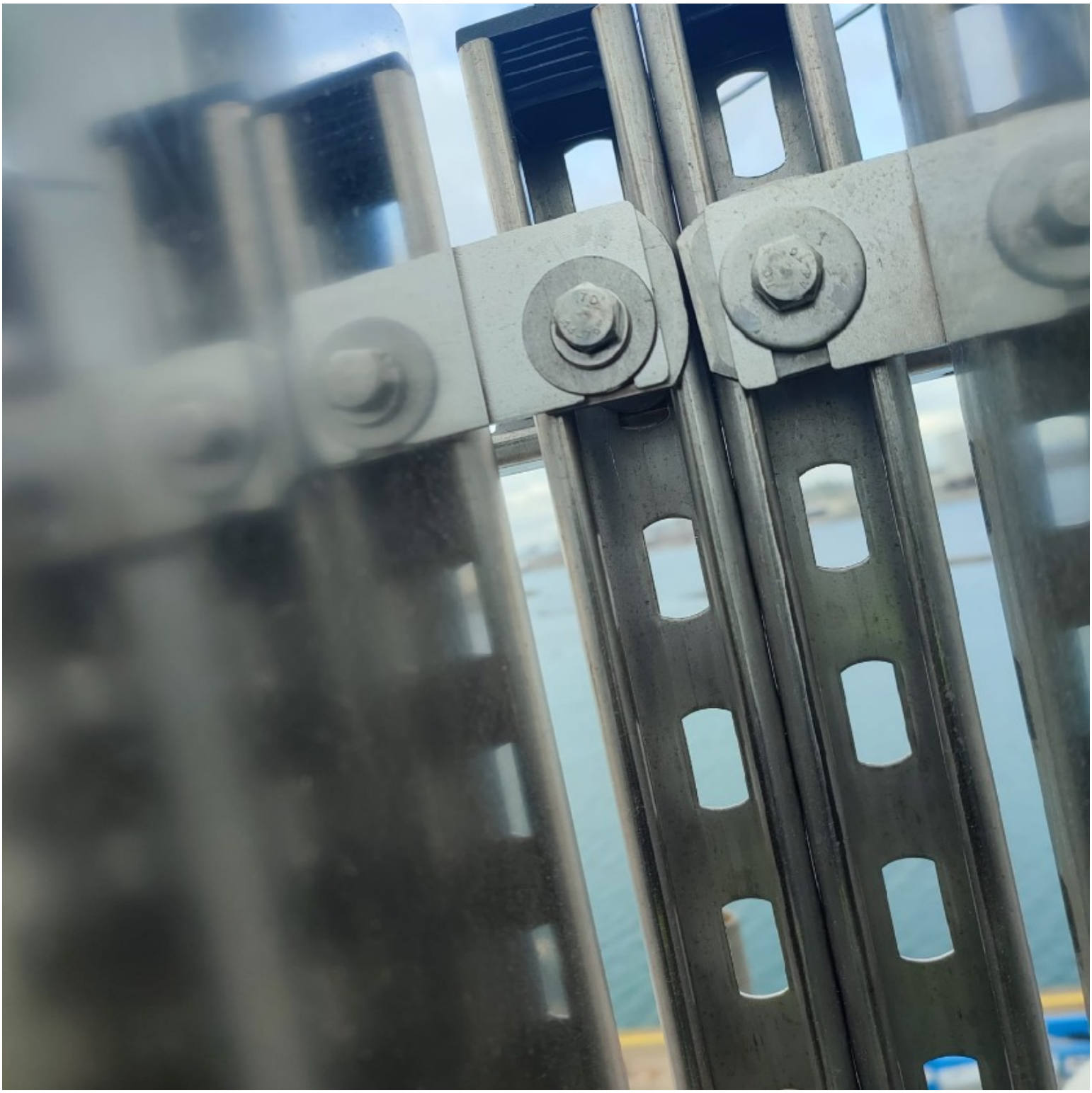
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002537

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Core identification tags are missing on 950-JE-02101 side and are wrong on sideB400-FGS-003 . See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Core indentification now is correct.

Name: Giovanni Tangianu

Date: 2025-02-26

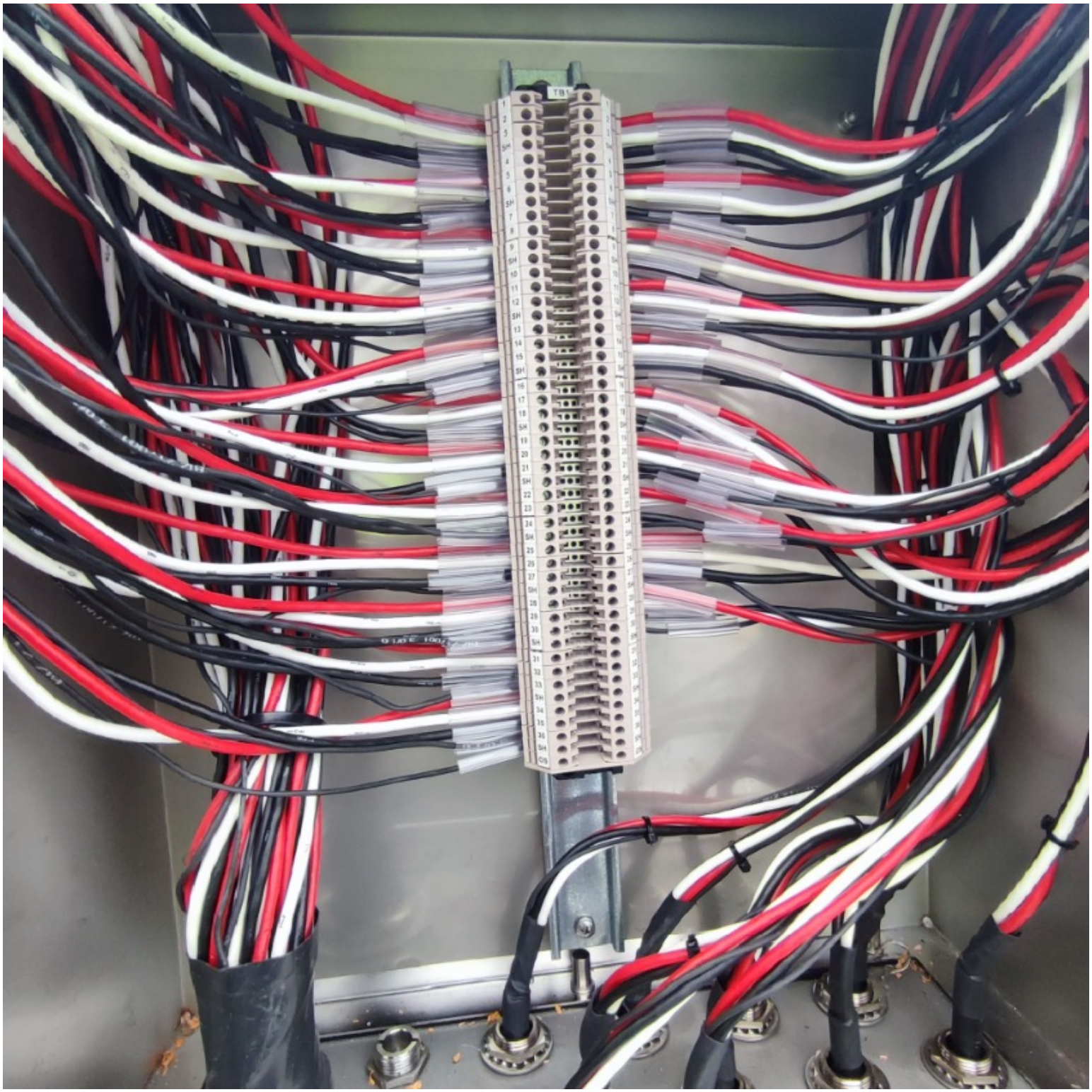
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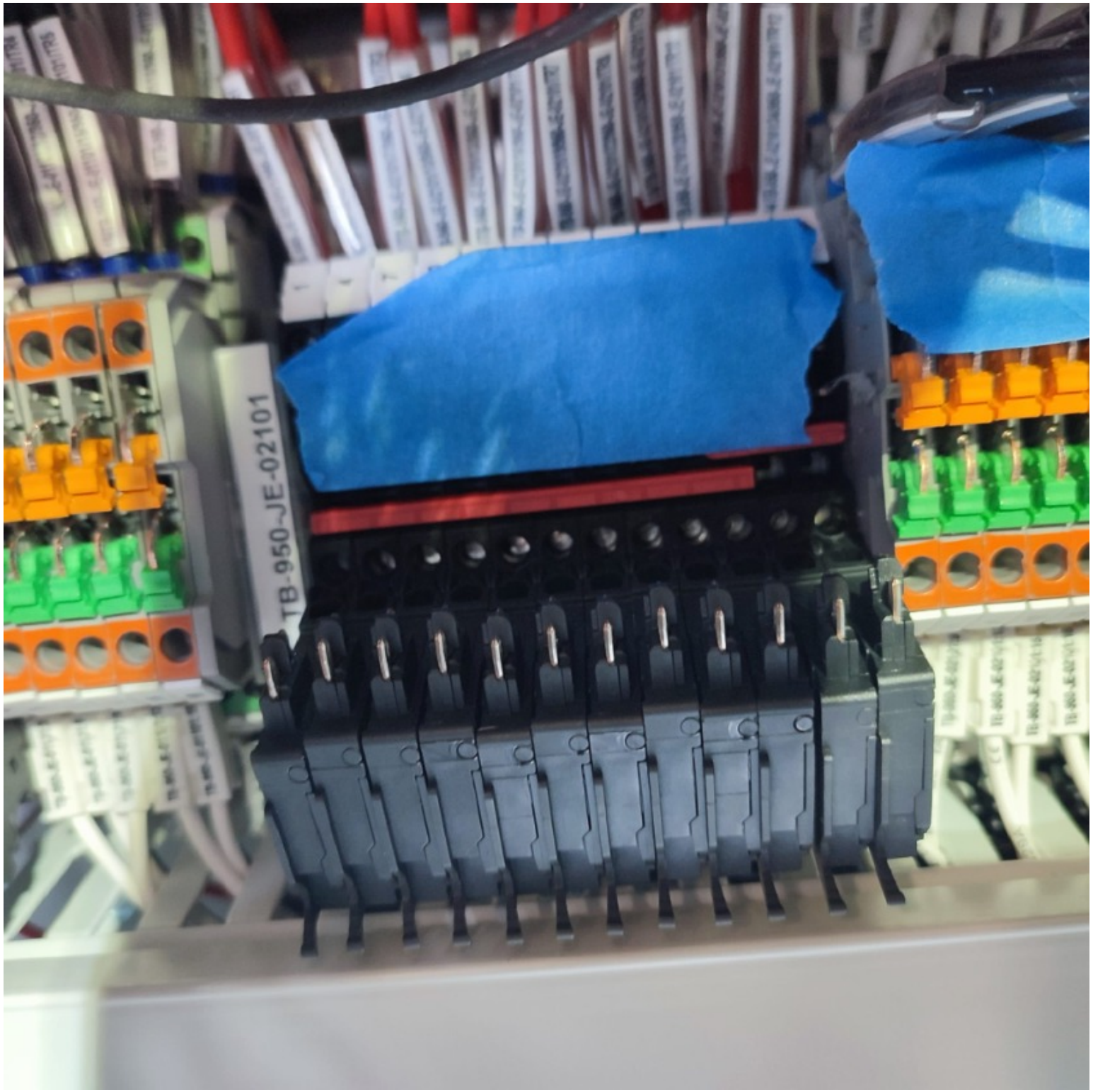
6- CLEARANCE APPROVAL

Name:

Date:

Signature:




TB-950-JE-02101

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002538

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Missing cable tag side the (950-JE-02101).See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-04

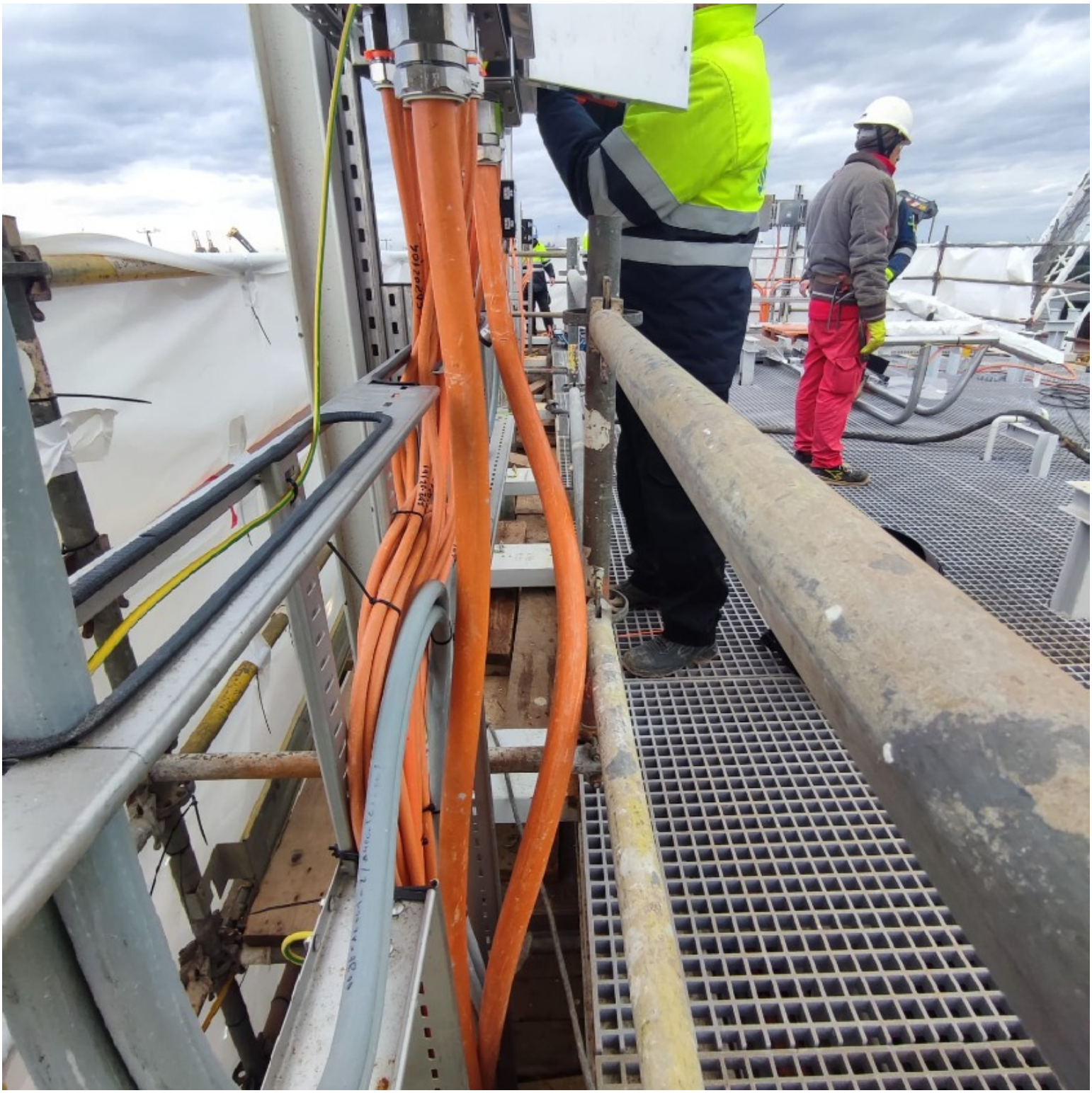
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002539

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Cable is outside the cabletray side the 950-JE-02101. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-09

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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

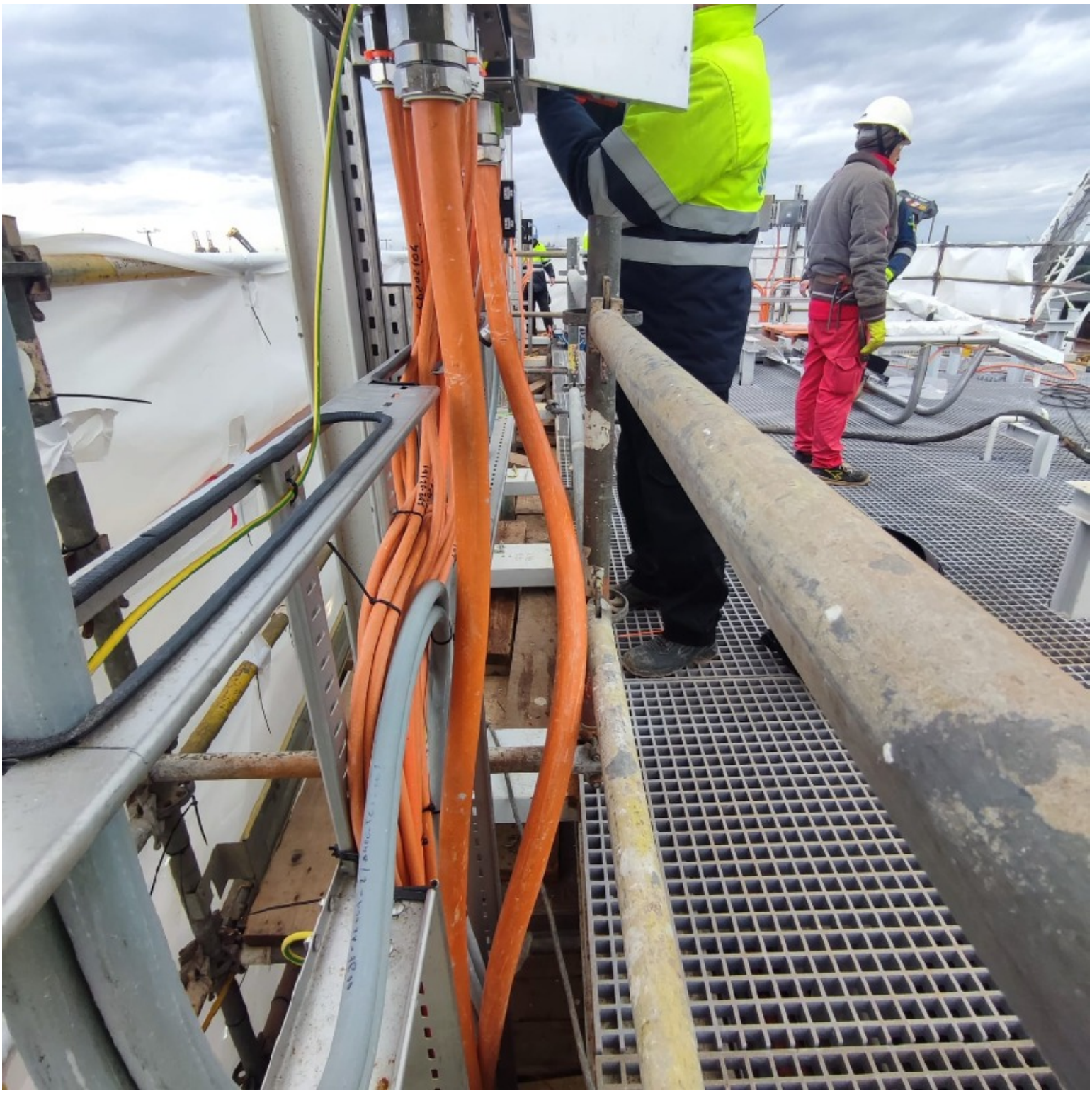
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002540

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002152	1.4 Discipline	Instrumental
1.2 Item	950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	
1.3 Subsystem	70-00-04	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	

2 - OBSERVATION

Not enought threads are thightened between the lock nut and the cable gland body side (950-JE-02101).
See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-09
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	2025-01-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

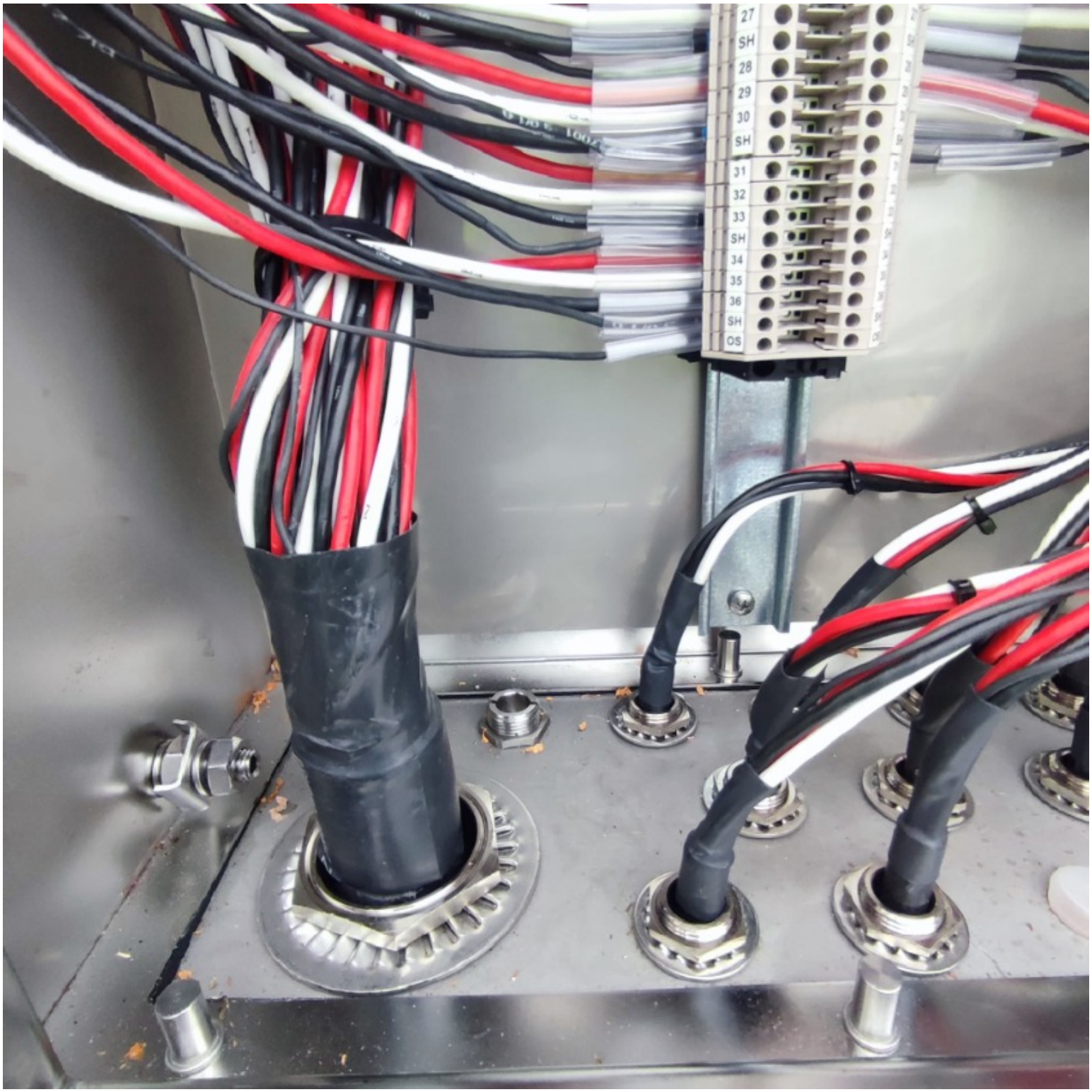
5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto
Date: 2025-01-23
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


27
SH
28
29
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SH
31
32
33
SH
34
35
36
SH
OS

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

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-04 & process: MC & discipline : Y

ATEX	70-00-04 Junction Box 950-JE-02101 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-02101	AI JB TO FGS	ONSHORE	C10002151	CJX01	100	2025-01-09	RFC 1

ITEM	Tag	950-JE-02101	: AI JB TO FGS			Dwg	123A90-DDL-IN-DL-40081
	S/Sys	70-00-04	: Junction Box 950-JE-02101 and Multi-core cable (FGS System)			Module	UD
TASK	code	C10002151	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		24/87931			
Manufacturer	Cortem Spa			**Model**		CTB453820S1			
Cert No.	CESI 03 ATEX 333			**Equipment Ambient Temp.**		-40 to + 40 °C			
Area Classification	Hazardous	**Zone**	2	**Gas group**	II C	**Temp class**	T1		
Equipment Protection Type	Ex eb	**EPL**	Gb	**Gas group**	II C	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	NA	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	950-JE-02101	: AI JB TO FGS			Dwg	123A90-DDL-IN-DL-40081
	S/Sys	70-00-04	: Junction Box 950-JE-02101 and Multi-core cable (FGS System)			Module	UD
TASK	code	C10002151	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		PL	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	OK	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	OK	
60	Power conductors are not bunched together causing possible hot spots	x	OK	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

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ITEM	Tag	950-JE-02101	: AI JB TO FGS			Dwg	123A90-DDL-IN-DL-40081
	S/Sys	70-00-04	: Junction Box 950-JE-02101 and Multi-core cable (FGS System)			Module	UD
TASK	code	C10002151		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

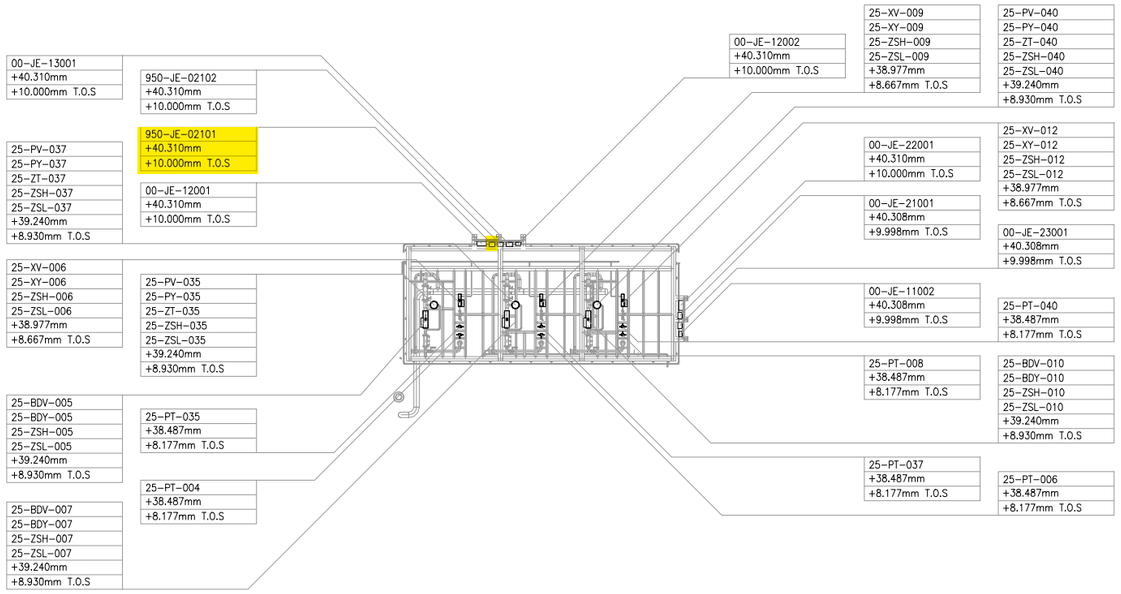
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-08	2025-01-09	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:04:48.501Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-09T13:06:27.758Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

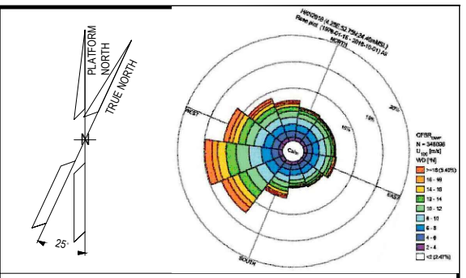
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 36500mm to 47060mm



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-40080	INSTRUMENT LAYOUT - LOWER 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-LOWER 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	ACCEPT 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-40081**

REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE :

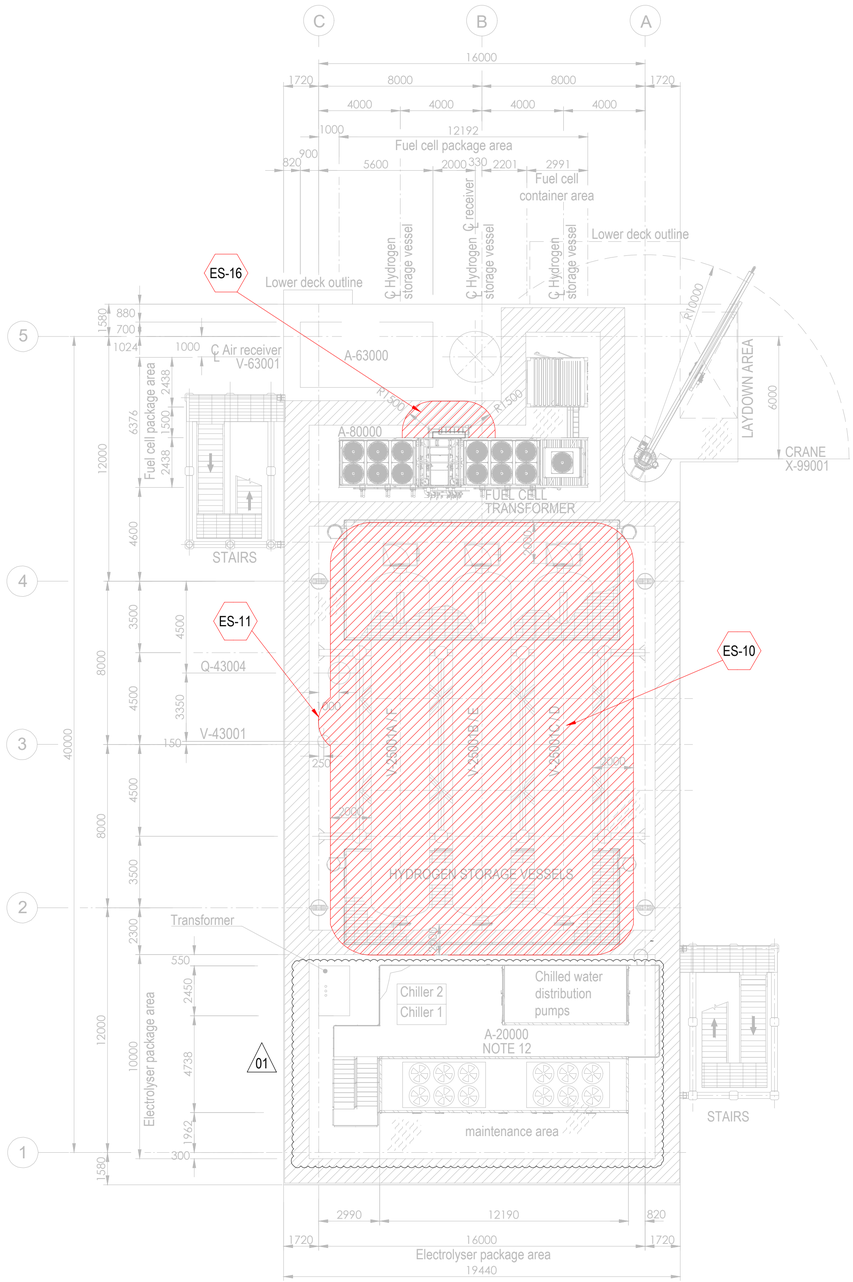
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–UPPER DECK
TOS EL. 30.310M

CONTRACT NO./TITLE CW-1-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–40081	SHEET 003	REV. 02

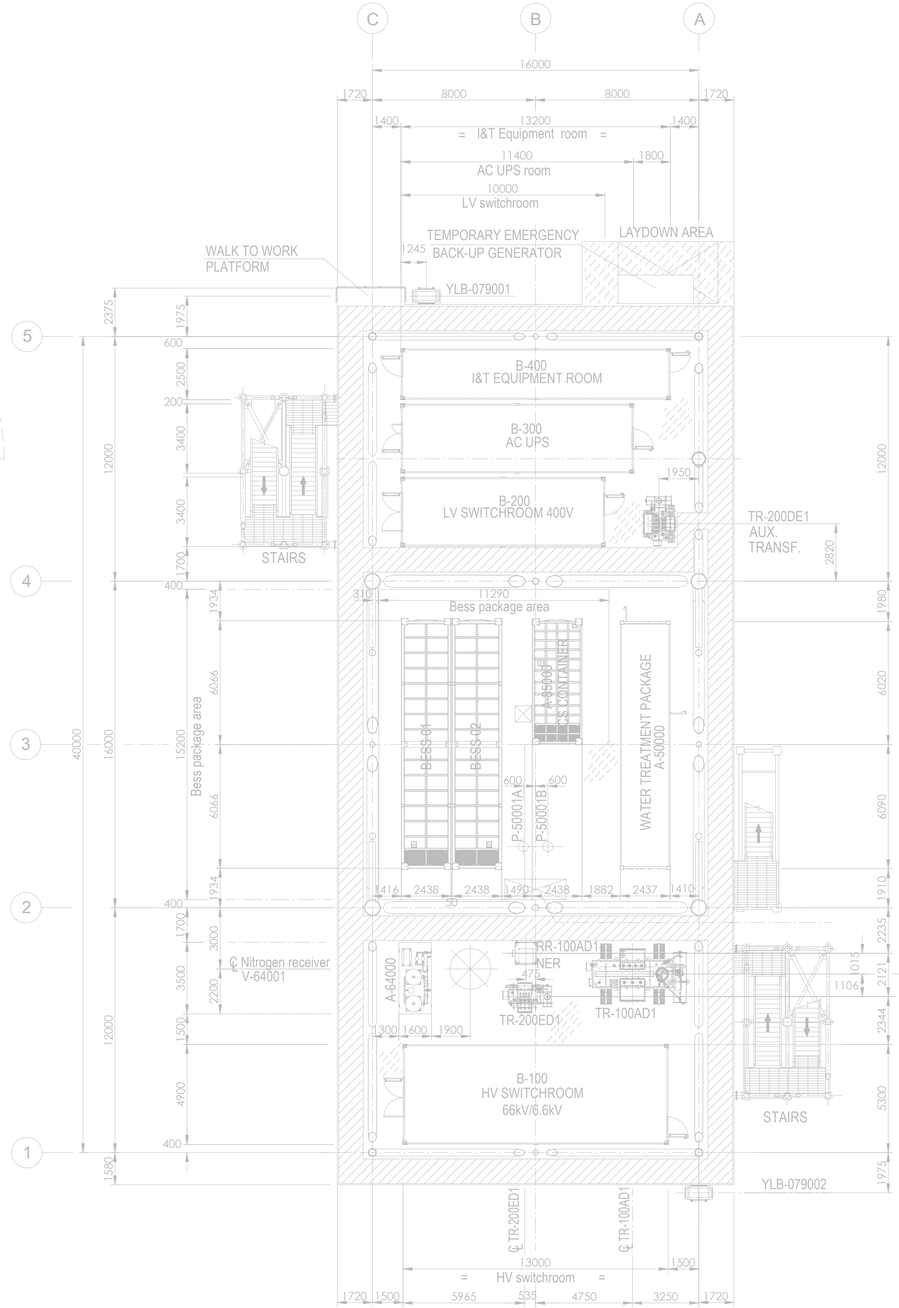
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DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 01



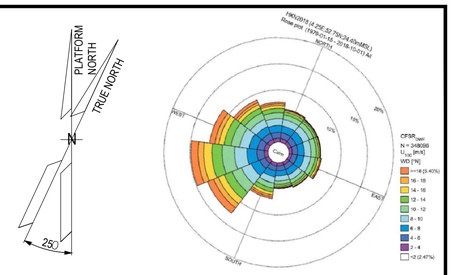
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

01

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

01

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

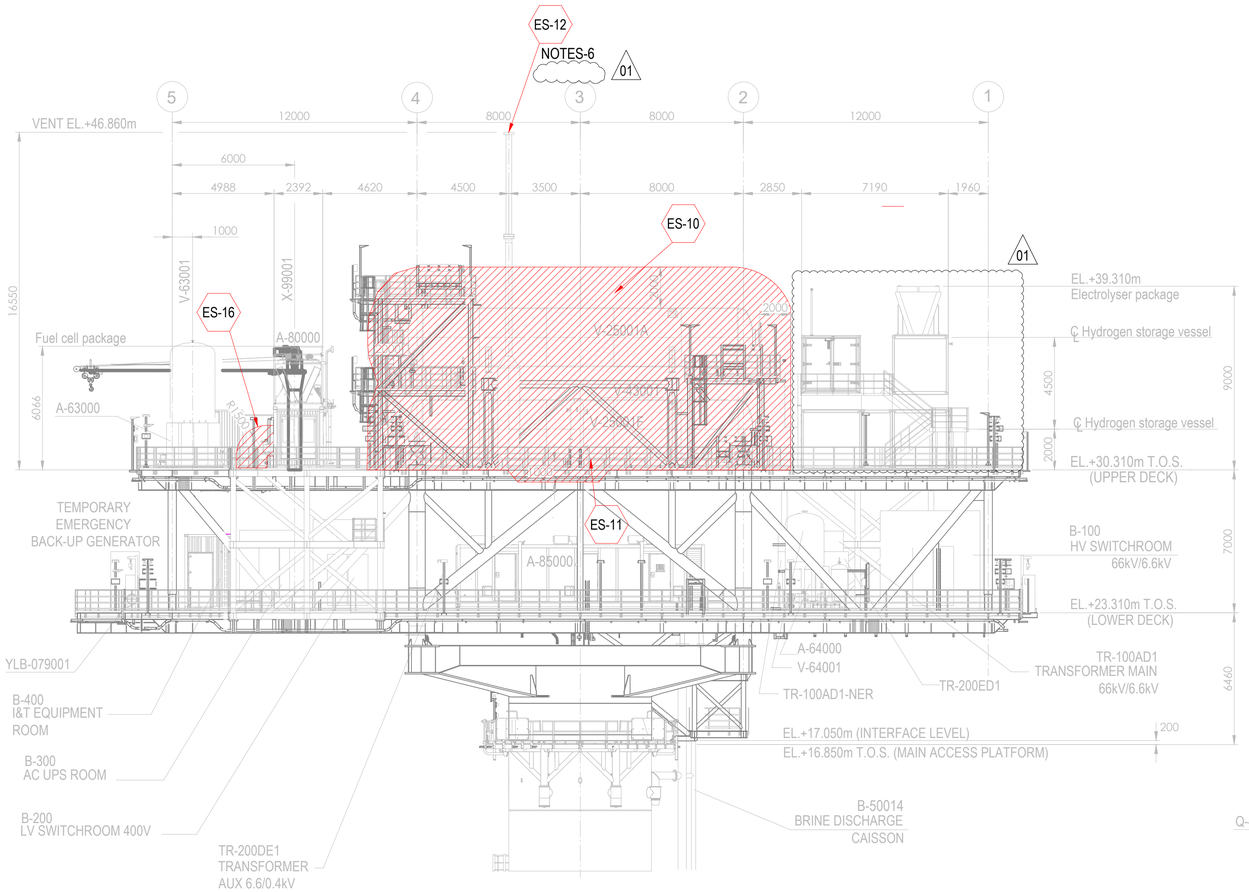
TITLE : BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30022	SHEET 001	REV. 01

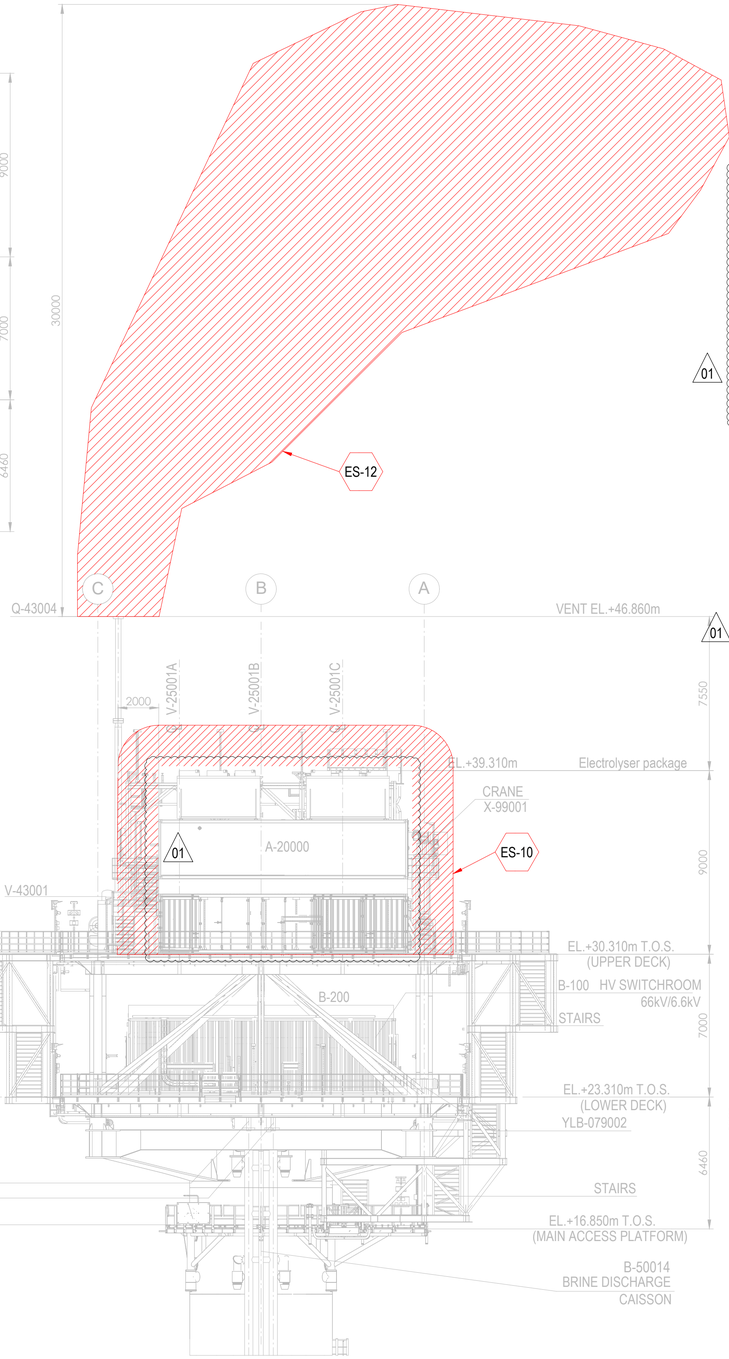
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 01



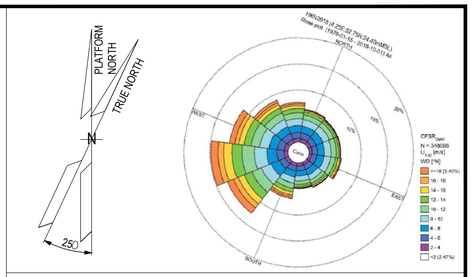
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

01

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. (ES12) IS SHOWN ONLY ON ELEVATION LOOKING NORTH ON THIS LAYOUT
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

01

LEGEND

ZONE 0 | ZONE 1 | ZONE 2 | ES EMISSION SOURCES

01

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30024	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30024 Rev.01

DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD

INSTRUMENTS

<01>

Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02101	1 RD, 3 WH, 2 BK	C-950-FDZ-02101/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02102	1 RD, 3 WH, 2 BK	C-950-FDZ-02102/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02103	1 RD, 3 WH, 2 BK	C-950-FDZ-02103/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02104	1 RD, 3 WH, 2 BK	C-950-FDZ-02104/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02101	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02101/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02102	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02102/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02103	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02103/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02104	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02104/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02105	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02105/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2
	950-GDZ-02106	PWR+ RD, 4-20mA WH, PWR- BK	C-950-GDZ-02106/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

JUNCTION BOX

950-JE-02101

TB-1

1	RD	RD	
2	WH	WH	TR1
3	BK	BK	
SH			
4	RD	RD	
5	WH	WH	TR2
6	BK	BK	
SH			
7	RD	RD	
8	WH	WH	TR3
9	BK	BK	
SH			
10	RD	RD	
11	WH	WH	TR4
12	BK	BK	
SH			
13	RD	RD	
14	WH	WH	TR5
15	BK	BK	
SH			
16	RD	RD	
17	WH	WH	TR6
18	BK	BK	
SH			
19	RD	RD	
20	WH	WH	TR7
21	BK	BK	
SH			
22	RD	RD	
23	WH	WH	TR8
24	BK	BK	
SH			
25	RD	RD	
26	WH	WH	TR9
27	BK	BK	
SH			
28	RD	RD	
29	WH	WH	TR10
30	BK	BK	
SH			
31	RD	RD	
SPARE 32	WH	WH	TR11
33	BK	BK	
SH			
34	RD	RD	
SPARE 35	WH	WH	TR12
36	BK	BK	
SH			
OS			

MULTICABLE

No.

950-JE-02101/B400-FGS-003

~~950-JE-02101/B400-FGS-002~~

12x3x2.5mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

~~B400-FGS-002~~

B400-FGS-003

TB-950-JE-02101

TR1	RD	1	
	WH	2	950-FDZ-02101
Shield Bar	BK	3	
TR2	RD	4	
	WH	5	950-FDZ-02102
Shield Bar	BK	6	
TR3	RD	7	
	WH	8	950-FDZ-02103
Shield Bar	BK	9	
TR4	RD	10	
	WH	11	950-FDZ-02104
Shield Bar	BK	12	
TR5	RD	13	
	WH	14	950-GDZ-02101
Shield Bar	BK	15	
TR6	RD	16	
	WH	17	950-GDZ-02102
Shield Bar	BK	18	
TR7	RD	19	
	WH	20	950-GDZ-02103
Shield Bar	BK	21	
TR8	RD	22	
	WH	23	950-GDZ-02104
Shield Bar	BK	24	
TR9	RD	25	
	WH	26	950-GDZ-02105
Shield Bar	BK	27	
TR10	RD	28	
	WH	29	950-GDZ-02106
Shield Bar	BK	30	
TR11	RD	31	
	WH	32	SPARE
Shield Bar	BK	33	
TR12	RD	34	
	WH	35	SPARE
	~~BK~~	36	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_N	06/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

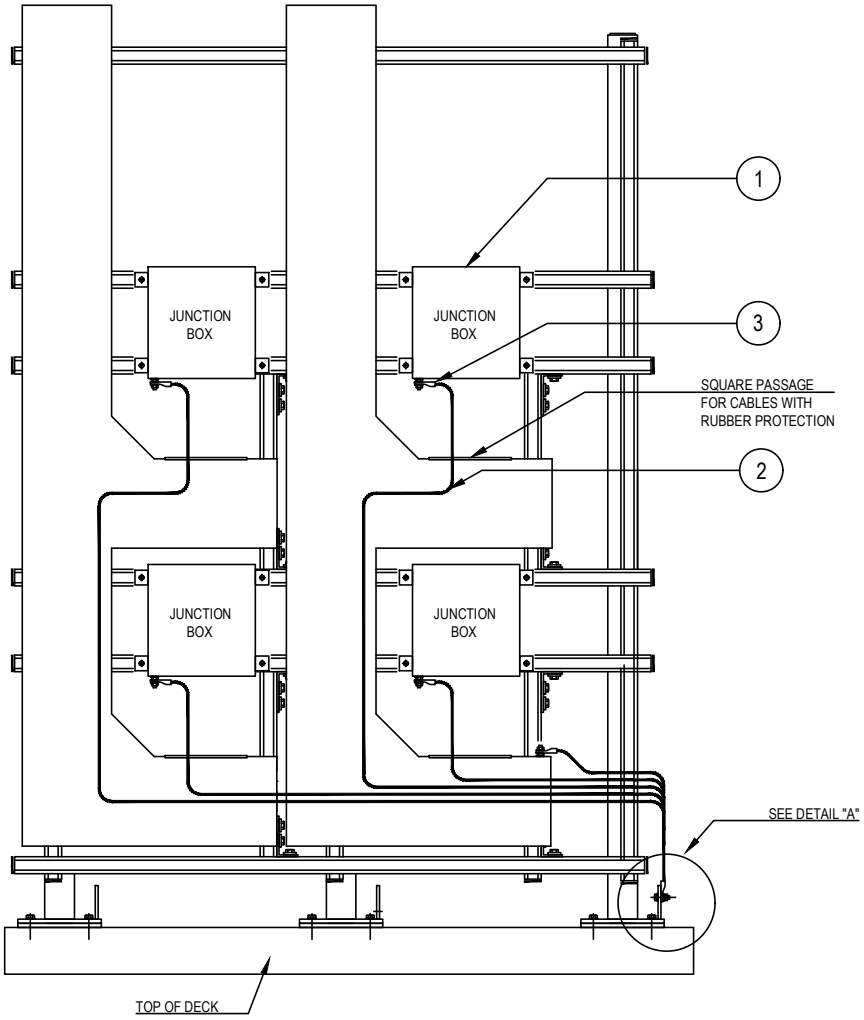
BASE LOAD POWER HUB (BLPH)
INSTRUMENT-FGS WIRING DIAGRAMS
950-JE-02101

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40016	SHEET 033	REV. 01

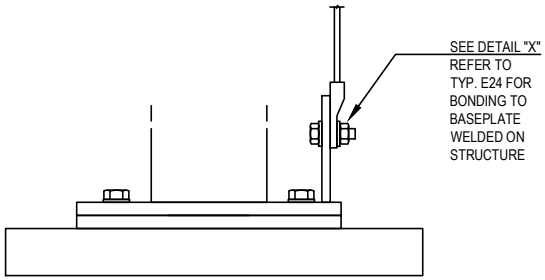
File Name : 123A90-DDL-IN-DG-40016_Rev.01

E15

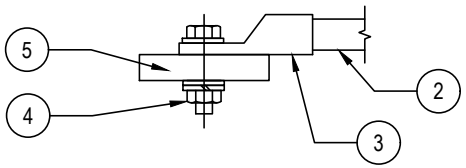
POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	JUNCTION BOX (Ex)	GRP			
2	Y / G INSULATING COPPER CONDUCTOR	COPPER	6mm^2		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	AISI 316L	6mm^2		~~NOTE 1~~
4	HEXAD BOLTS, PLANE WASHERS, GROWER SPRING WASHER AND NUT	AISI 316L	M8X30		
5	EARTHING PLATE	AISI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

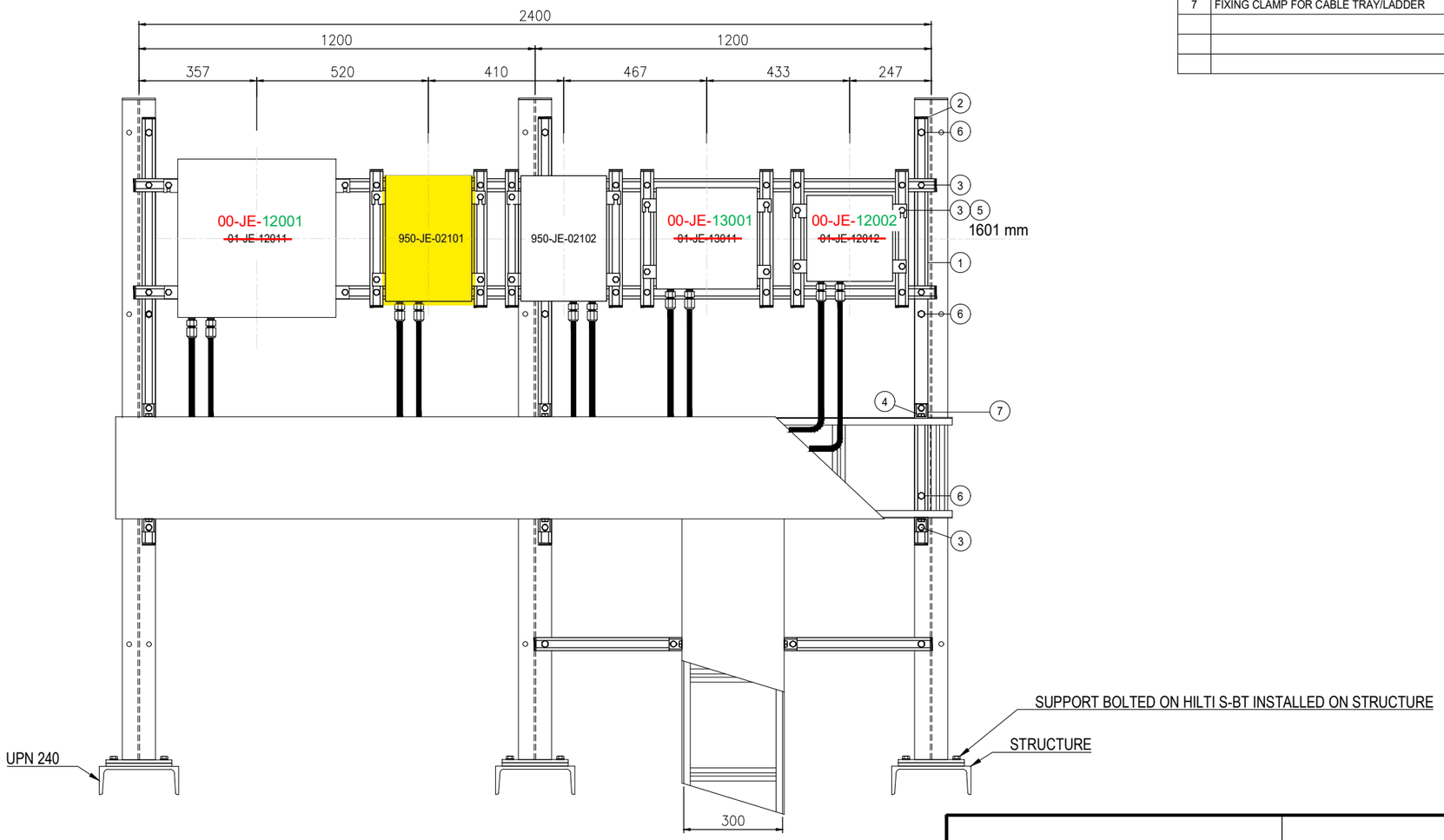
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

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

JB-03

POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	16m
2	LDPE PLUG FOR U-CHANNEL 41x41	28
3	AISI 316L SPRING NUT M10 FOR U-CHANNEL 41X41 + BOLT M10x35 + WASHER M10	50
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	8
5	AISI 316L M10 SINGLE HOLE SQUARE FIXING PLATE FOR U-CHANNEL 41x41	11
6	AISI 316L BOLT M12X35 + NUT M12 + WASHER M12	11
7	FIXING CLAMP FOR CABLE TRAY/LADDER	8



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

REV. 00

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

REV.:	DATE:	SIGNATURE:
1_I	20/12/24	V.Ramponi

ROSETTI MARINO SpA

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)

CROSSWIND

ROSETTI MARINO

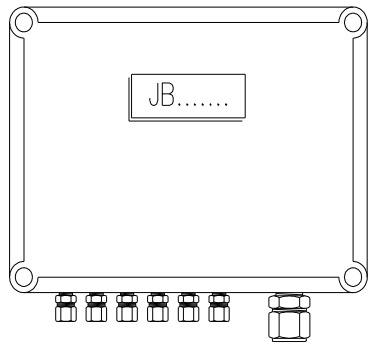
TITLE :

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 006	REV. 01

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_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

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

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MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001299 DD 27/06/2024
- ITEM.: 8
- Q.TY: 4
- JB MATERIAL: INOX316L
- EXTERNAL PAINTING: NOT PAINTED
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

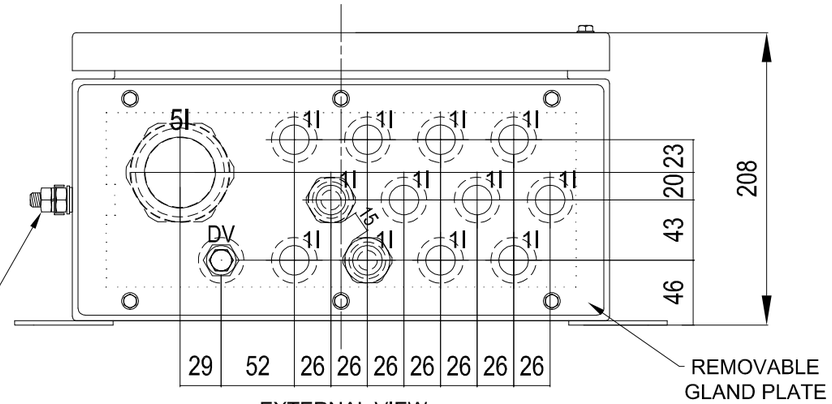
N°	Q.TY	CODE	DESCRIPTION
IF	1	B45-443	INTERNAL MOUNTING FRAME
TB-1	49	WDU2,5A	Ex eb TERMINAL BLOCK 2,5mmq BEIGE COLOUR (WEIDMULLER)
DV	1	ECDE-D1S	Ex eb IIC Gb INOX DRAIN VALVE ISO M20x1.5

TAG LIST
MATERIAL: INOX
DIMENSION: 60x20

DESCRIPTION
950-JE-02101
950-JE-02102
950-JE-03101
950-JE-05101

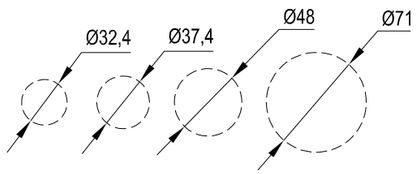
BOTTOM SIDE

5I - n°1 Ø50.5
1I - n°12 Ø20.5

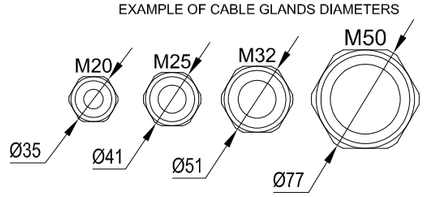


EXTERNAL VIEW

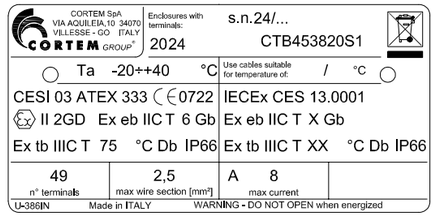
EXAMPLE OF STAR WASHERS DIAMETERS (WEIDMULLER SZS SERIES)



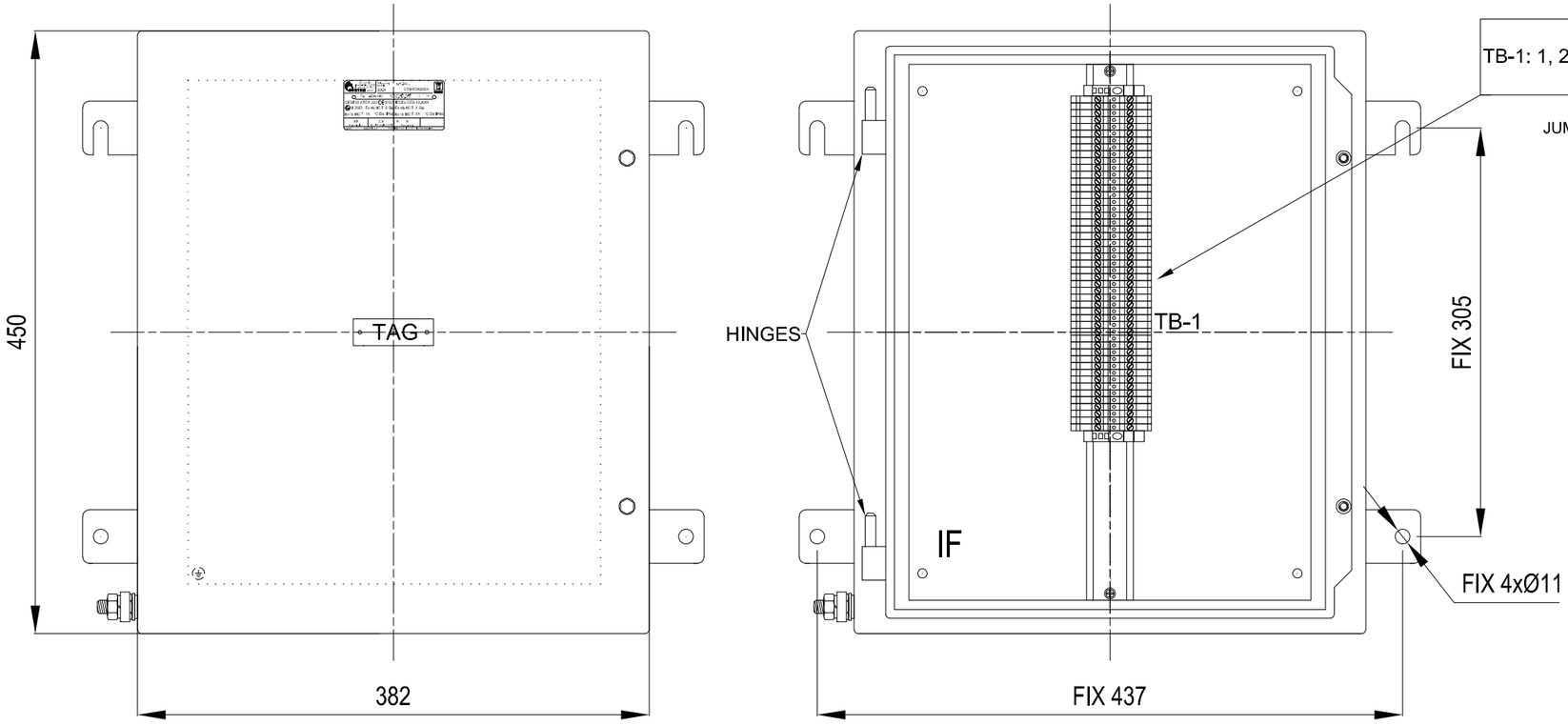
EXAMPLE OF CABLE GLANDS DIAMETERS



CERTIFICATE NAMEPLATE

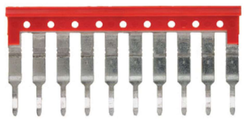


INTERNAL VIEW



TB-1: 1, 2, 3, SH, 4, 5, 6, SH ..... 34, 35, 36, SH, OS

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



NOTE CORTEM:
- COMM: COV2402708
- RIGA: 8
- Q.TY: 4
- ART. INFOR: CTB453820S1/C2402708/70.
- 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
008 CTB453820S1/C2402708/70.

CORTEM JOB: COV2402708
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27524
SHEET 8 NEXT 9
TOT. 11

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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

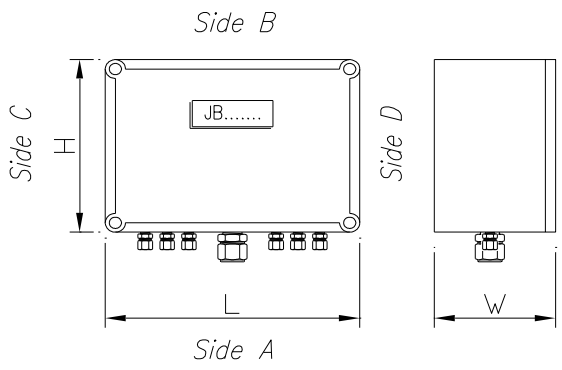
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Q.TY	ITEM	MANUFACTURER	MODEL
4	*Refer to page 5*	**CORTEM**	**CTB382620S1/C2402708/70**

CABLE ENTRIES: 1 M50 + 12 M20

TYPE - 1E

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	**49**
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, 3, SH, 4, 5, 6, SH, … 34, 35, 36, SH, OS*
	Engraved Charapters Height			10	mm		

Type	☐ Unloosening	☑ Size	2,5 mm2
Material	☑ Thermoplastic	☐ Thermosetting	
Colour	☑ Std Manufac.	☐ Blue Ex-i	
Mounting On	☐ "C" Bar according to std. EN-50035		
Mounting On	☑ "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	/	/	1	M50	/	/	/	/	/	/	☐	☐	/	/	/
A	/	/	12	M20	/	/	/	/	/	/	☐	☐	/	/	/
A											☐	☐			
B											☐	☐			
B											☐	☐			
B											☐	☐			
C											☐	☐			
C											☐	☐			
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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
950-GDZ-04211	FZ-04 H2 detect. in B-300 AC UPS room	LOWER DECK	1724000821	Fores	Dräger	ARTB-1628	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04212	FZ-04 H2 detect. in B-300 AC UPS room	LOWER DECK	1724000821	Fores	Dräger	ARTB-1627	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04213	FZ-04 H2 detect. in B-200 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-0202	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04214	FZ-04 H2 detect. in B-200 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-1616	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04215	FZ-04 H2 detect. in B-200 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-1621	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04216	FZ-04 H2 detect. in B-200 LV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARTB-1614	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04217	FZ-04 H2 detect. in B-200 LV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARTB-1610	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-04218	FZ-04 H2 detect. in B-200 LV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARTC-2199	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05101	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARTB-1626	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05102	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARTB-1623	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05103	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARTB-1622	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05104	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARSD-0457	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05105	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARTB-1612	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-05106	FZ-05 H2 detect. in bess area	LOWER DECK	1724000821	Fores	Dräger	ARTB-1617	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06201	FZ-06 H2 detect. in B-100 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-1634	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06202	FZ-06 H2 detect. in B-100 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-1629	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06203	FZ-06 H2 detect. in B-100 HVAC air intake	LOWER DECK	1724000821	Fores	Dräger	ARTB-1639	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06204	FZ-06 H2 detect. in B-100 HV/MV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARTB-1637	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06205	FZ-06 H2 detect. in B-100 HV/MV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARTB-0204	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-GDZ-06206	FZ-06 H2 detect. in B-100 HV/MV SWGR room	LOWER DECK	1724000821	Fores	Dräger	ARSD-0466 8344448	Polytron® 8200 CAT DQ d S 4-20/HART®	II 2 G	PTB 11 ATEX 1005X (TR) BVS 13 ATEX G 001X (TR) DEMKO 09 ATEX 0924202X (SENSOR) CML 18ATEX 1320X (REDUCTION)	1724000821-COM-LIS-00011	II 2G Ex-d IIC T1	-	N/A	True	N/A	True	
950-JE-01101	FGS Analog JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87926	CTB262616S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-01102	FGS Analog JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87926	CTB262616S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-01103	FGS Digital Input JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87925	CTB262616S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-01104	FGS Digital Output JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87927	CTB262616S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-02101	FGS Analog JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87931	CTB453820S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-02102	FGS Analog JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87931	CTB453820S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	
950-JE-02103	FGS Analog JB	UPPER DECK	1724001299	Cortem Spa	Cortem Spa	24/87926	CTB262616S1	Zone 1	CESI 03 ATEX 333	1724001299-IN-LIS-00005	Ex eb IIC T6 Gb	N/A	N/A	True	N/A	False	HAZARDOUS-AREA_3

CESI

ISMES

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www.cesi.it

CESI-ATEX

Schema di certificazione

CERTIFICATE

[1] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 03 ATEX 333 /05

[4] Product: **Terminal boxes series CTB, CSTB, SA and CTBE**

[5] Manufacturer: **COR.TEM S.p.A.**

[6] Address: Via Aquileia, 10 – 34070 Villesse (GO) – Italy.

[7] This supplementary certificate extends EC–Type Examination Certificate CESI 03 ATEX 333 to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. EX- C0007256.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

Ex II 2 GD	**Ex eb IIC T6, T5, T4 Gb** **Ex tb IIIC T75°C, T110°C Db** **IP66**
	or
Ex II 2 GD	**Ex ia IIC T6, T5, T4 Gb** **Ex ia IIIC T75°C, T110°C Db** **IP66**
	or
Ex II 2 GD	**Ex eb ia IIC T6, T5, T4 Gb** **Ex tb ia IIIC T75°C, T110°C Db** **IP66**

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Date 2020.05.22 - Translation issued the 2020.05.22

Prepared	**Verified**	**Approved**
Alessandro Fedato	Mirko Balaz	Roberto Piccin

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO
PRD N. 018B
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**

[15] **Description of the variation to the product**

- Updating to EN IEC 60079-0:2018 Standard.
- To the Increased safety Terminal boxes **SA../P** series made in polyester resin, new colours for boxes were added.
- The Increased safety Terminal boxes **SA..**, **SAG..**, **CTB**** and **CSTB..** series can be supplied with external painting.
- Terminal boxes **SA..** and **SAG..** series made of aluminium alloy can be supplied with internal anticondensation/antifungal painting and draining and breathing valve ECD-2.. and ECDE.. series.

Description of equipment

Increased safety Terminal boxes **SA..**, **SAG..**, **CTB..**, **CSTB..** and **CTBE..** series are used to hold Ex eb and/or Ex ia terminal blocks for rail mounting, scope of separated ATEX certification. They consist in enclosures made of Aluminium alloy, Polyester resin glass fibre reinforced in different colours or Stainless steel for **SA..** series, while **CTB..**, **CSTB..** and **CTBE..** series are made of Stainless steel only.
The covers of boxes are fixed to the bodies with Stainless steel screws, whose number depends on the size and on possible accessories. The degree of protection IP66 is guarantee by the EPDM/SBR or Silicon gaskets placed between the covers and the body.
The walls and the bottom of the boxes can be drilled with maximum size and maximum number of holes as specified in the manufacturer documents. The cable glands or plugs, with separate ATEX certificate, are mounted using locknut and gasket.
Each enclosure is provided with internal and external earthing screw or bolt. Each conductor should be provided with terminal lugs.
The products can be supplied with external painting. In this case a warning label shall be applied regarding the risk of electrostatic charge. Furthermore, on request, can be applied an internal anticondensation/antifungal painting and draining and breathing valve ECD-2** or ECDE series, scope of separate certification.
The enclosures can be equipped with the terminal blocks specified into manufacturer documents or with other terminal blocks scope of separated ATEX certification with identical characteristics.

Electrical characteristics

	Standard applications	**Signal circuits applications**	
		T6/T75°C with max. T_{amb} +60°C	**T4/T110°C with max. T_{amb} +85°C**
Rated voltage	1000 Vac/dc	-	-
Rated current	312 A	1 A for **Ex eb** exec. 100 mA for **Ex ia** exec.	10 A for **Ex eb** exec. 100 mA for **Ex ia** exec.
Rated frequency	50/60 Hz	-	-
Terminal section	1.5 ÷ 300 mm^2	-	-

Degree of protection (EN 60529): IP 66.

The above specified ratings are maximum values admitted. Effective values will be function to the electrical equipment/component used from case to case. Depending on the system conditions, the operating mode, the utilization category, etc.. the manufacturer will define these ratings which will be within the range of these limiting values and will comply with the relevant Standards.
The type and number of terminals which can be installed in the various enclosures, is indicated in detail together with the maximum admissible current, in the manufacturer documentation. When selecting the permitted current for cross section, the maximum current admitted for the terminals, connecting cables or conductors should be taken into consideration.

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[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**

Operative temperature ranges:

Table 1.

Standard temperature ranges					
Enclosure material	**Type of gasket for enclosure**	**Ambient temperature**	**Temperature class**	**Max. surface temp.**	**Max. service temperature of terminals (*)**
Aluminium alloy, Stainless steel, Polyester resin	**VMQ SPS 060** (SA**, SA**/P) **SILICONCELL** (CTB**, CTBE** covers, SA**SS, CTB** gland plates) **EPDM/SBR** (SA**SS bodies)	-40°C +40°C	T6	T75°C	+80°C
		-40°C +55°C	T5	T75°C	+95°C

Table 2.

Temperature range for Signal circuits (max. 1A for not Ex i circuits, max. 100mA for Ex i circuits)					
Enclosure material	**Type of gasket for enclosure**	**Ambient temperature**	**Temperature class**	**Max. surface temp.**	**Max. service temperature of terminals (*)**
Aluminium alloy, Stainless steel, Polyester resin	**VMQ SPS 060** (SA**, SA**/P) **SILICONCELL** (CTB**, CTBE** covers, SA**SS, CTB** gland plates) **EPDM/SBR** (SA**SS bodies)	-40°C +60°C	T6	T75°C	+80°C

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[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**

Table 3.

Low and high temperature ranges					
Enclosure material	**Type of gasket for enclosure**	**Ambient temperature**	**Temperature class**	**Max. surface temp.**	**Max. service temperature of terminals (*)**
Aluminium alloy, Stainless steel	**VMQ SPS 060** (SA**) **VMQ MG1077N40** (SA**SS bodies) **SILICONCELL** (CTB**, CTBE** covers, SA**SS, CTB** gland plates)	-60°C +40°C	T6	T75°C	+80°C
		-60°C +55°C	T5	T75°C	+95°C
		-60°C +65°C(**)	T5	T75°C	+95°C
Polyester resin	**VMQ SPS 060** (SA**/P)	-40°C +65°C(**)	T5	T75°C	+95°C

Table 4.

High temperature range for Signal circuits (max. 10A for not Ex i circuits, max. 100mA for Ex i circuits)					
Enclosure material	**Type of gasket for enclosure**	**Ambient temperature**	**Temperature class**	**Max. surface temp.**	**Max. service temperature of terminals (*)**
Stainless steel	**VMQ MG1077N40** (SA**SS bodies) **SILICONCELL** (CTB**, CTBE** covers, SA**SS, CTB** gland plates)	-60°C +85°C	T4	T110°C	+120°C

(*) – The maximum Service temperature of terminals installed inside the enclosures should be equal or greater than the temperature indicated into the tables shown above.

(**) – The maximum dissipated power and rated current admitted for these temperature ranges should be decreased applying the decreasing factors as specified into Table 5.

This certificate may only be reproduced in its entirety and without any change, schedule included.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**

Maximum dissipated power and rated current admitted
In the table below are shown the Power (W) and Current (A) decreasing factors applicable to remain within the Temperature class declared in the manufacturer documents.

Table 5.

Enclosure Material	Temperature Class	Ambient Temperature	Power decreasing factor	Current decreasing factor
Polyester resin	T6	+40°C	None	None
	T5	+55°C	None	None
	T5	+60°C	**-25%**	**-15%**
Aluminium alloy or Stainless Steel	T6	+40°C	None	None
	T5	+55°C	None	None
	T5	+65°C	**-25%**	**-15%**

Identification of Terminal boxes SA**, SAG**, CTB**, CSTB** and CTBE**:

SA □ □

Code of the series
SA
SAG

Size of boxes (**301410**, **473018** etc)

Material & Number of gland plates:
Blank for aluminium alloy boxes
/P for polyester resin boxes
SS for stainless steel boxes without gland plates
SSC for stainless steel boxes with locking devices on cover and without gland plates.
SSF1, SSF2, SSF3, SSF4 for stainless steel boxes with 1, 2, 3 or 4 gland plates.
SSCF1, SSCF2, SSCF3, SSCF4 for stainless steel boxes with locking devices on cover and with 1, 2, 3 or 4 gland plates.

C*** □ □

Code of the series:
CTB: Standard boxes
CSTB: CTB boxes without hinges

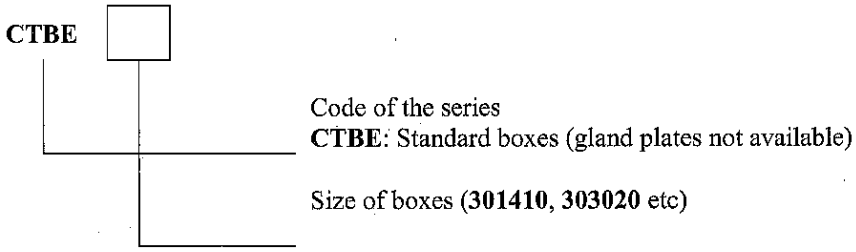
Boxes size *(**303020**, **503516** etc)*

Material & Number of gland plates:
S1, S2, S3, S4 for stainless steel boxes with 1, 2, 3 or 4 gland plates.
Blank for stainless steel boxes without gland plates
C, CS1, CS2, CS3, CS4 boxes with locking device on cover

This certificate may only be reproduced in its entirety and without any change, schedule included.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**



Other suffix can be added on the code for particular configurations.

Warning labels:

- *"Do not open when energized".*
- For Terminal boxes SA.., CTB.., CSTB.. and CTBE.. series with temperature class T4: *"Use cables suitable for a minimum temperature of 110°C".*
- For Terminal boxes SA.., CTB.., CSTB.. and CTBE.. series with temperature class T5: *"Use cables suitable for a minimum temperature of 90°C".*
- For products complete with external painting made in non-conductive material and for GRP materials different to standard black coloured: *"Warning - Potential electrostatic charging hazard – see instructions".*

[16] **Report n.** EX- C0007256

Routine tests
None.

[17] **Special conditions for safe use (X)**
None.

Installation conditions

- Accessories used for cable entries and for unused holes shall have a degree of protection IP66 and shall be suitably certificated.
- When selecting the admitted current for cross section, the maximum permitted current for the terminals and the connecting cable or conductor should be taken into consideration. The terminals shall be fitted in accordance with the manufacturer's instructions and when installed, they shall have the minimum clearance and creepage distances required by Table 1 of EN 60079-7 Standard.
- For terminal boxes with type of protection Ex ia the distances between Intrinsic safety circuits shall be according to EN 60079-11 Standard. Intrinsically safe circuits shall be clearly identified. Where a colour is used for this purpose, it shall be light blue for the intrinsically safe connections.
- The service temperature range of the terminals used shall be taken into consideration.
- Installation instruction documents provides details of dielectric strength routine test of 2U+1000 VAC with a minimum value of 1500 VAC between the supply terminals and earth.

This certificate may only be reproduced in its entirety and without any change, schedule included.

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333 /05**

[18] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements has been assured by compliance to the following standards:

EN IEC 60079-0: 2018 Explosive atmospheres – Part 0: Equipment - General requirements;

EN 60079-7: 2015 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure "d";

EN 60079-11: 2012 Explosive atmospheres – Equipment protection by intrinsic safety "i";

EN 60079-31: 2014 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t".

[19] **Descriptive documents** (prot. EX- C0007259)

- *Technical note A4-7483 (pg. 13)	rev.0	dated	21.10.2019
- *Safety, maintenance and mounting instructions F-408 (pg. 20)	rev.1	dated	21.10.2019
- *Declaration of Conformity Facsimile no. 0048		dated	21.10.2019
- *Annex (8 sheets)	rev.0	dated	21.10.2019
- Drawing no. A1-5703 (4 sheets)	rev.1	dated	21.10.2019
- Drawing no. A1-6266	rev.0	dated	10.04.2017
- Drawing no. A3-5704 (3 sheets)	rev.1	dated	10.04.2017
- Drawing no. A3-6267 (2 sheets)	rev.0	dated	10.04.2017
- Tables for max. number of conductors no. A4-5050 (35 sheets)	rev.1	dated	10.04.2017
- Annex (18 sheets)	rev.0	dated	10.04.2017
- Drawing no. A4-4274 (12 sheets)	rev.0	dated	10.10.2003
- Drawing no. A3-4658	rev.0	dated	10.10.2003
- Drawing no. A3-4677	rev.0	dated	10.10.2003
- Drawing no. A4-4129	rev.0	dated	26.06.2000
- Drawing no. A3-5049 (2 sheets)	rev.0	dated	18.03.2007
- Drawing no. A4-5258 (13 sheets)	rev.0	dated	15.02.2009

*Note: An * is included before the title of documents that are new or revised.*

One copy of all documents is kept in CESI files.

Certificate history

Issue nr	Issue Date	Summary description of variation
05	2020.05.22	Updating to standard EN IEC 60079-0:2018. To Terminal boxes SA**/P series made in polyester resin previously assessed, new colours for boxes were added. Terminal boxes SA**, SAG**, CTB** and CSTB** series can be supplied with external painting. Terminal boxes SA**, SAG** and CTB** series made of aluminium alloy can be supplied with internal anticondensation/antifungal painting and draining and breathing valve ECD-2** and ECDE series.
04	2017.06.26	Updating to standards EN 60079-0: 2012+A11:2013, EN60079-7:2015 and EN60079-31:2014. New minimum Tamb -60°C and maximum Tamb +85°C. The enclosures can be drilled on the bottom side. New thicknesses for plain gaskets, gland plates, bodies and covers were added. Plain gaskets made of CR/NBR materials were replaced with plain gaskets made of SBR. New enclosure sizes CTB916130 has been added. New enclosures series CTBE.. have been added.
03	2013.07.19	Updating to standards EN 60079-0 (2012), EN60079-7 (2007), EN60079-11 (2012) and EN60079-31:2014. New min. ambient temperature -40°C for SA../P series. New max. ambient temperature +60°C and Temp. class T6. New thicknesses for aluminium and polyester enclosure covers. New types of Silicon gaskets.
02	2009.05.12	New stainless steel CTB.. enclosure series has been added.
01	2008.05.21	Updating to standards EN 60079-0 (2006), EN60079-7 (2003), EN60079-11 (2007), EN 61241-0 (2006), EN 61241-1 (2004) and EN 61241-11 (2006). New SAG606018 and SA202012 sizes were added. New max. ambient temperature +55, +65 and +80°C. New min. ambient temperature -30°C for SA../P series.
00	2003.12.19	First Issue of the Certificate.

This certificate may only be reproduced in its entirety and without any change, schedule included.

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-04 & process: MC & discipline : I

Instrumental	70-00-04 Junction Box 950-JE-02101 and Multi-core cable (FGS System)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-JE-02101/B400-FGS-003	AI JB TO FGS / MARSHALLING PCS	ONSHORE	C10002152	CJX10	100	2025-01-09	RFC 1

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	950-JE-02101/B400-FGS-003	:	AI JB TO FGS / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	70-00-04	:	Junction Box 950-JE-02101 and Multi-core cable (FGS System)	Module	UD/LD_B-400	
TASK	code	C10002152	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-MICA-XLPE-IS-OS-LSZH-SWB-LSZH	Cores/Size mm²	12X3X2,5 mm2	Color	ORANGE
From	950-JE-02101	To	B400-FGS-003		

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.	PL
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	0,94	Ω
	SCREEN	0,94	Ω
	EARTH	NA	Ω
	ARMr	0,94	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

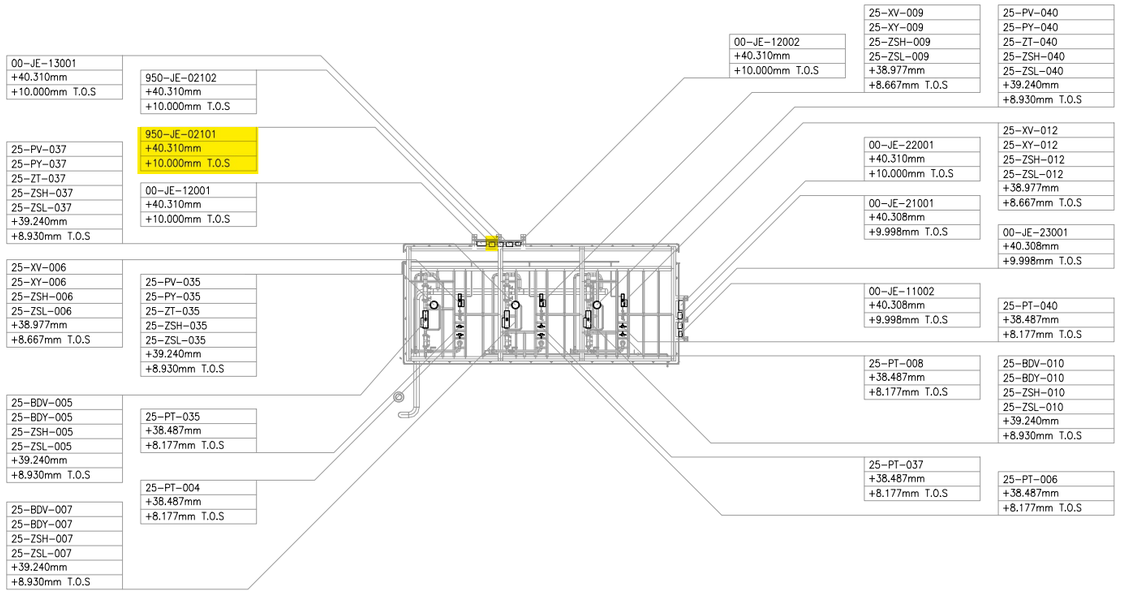
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N7722/24 10/07/2024

Comments Nota 4: refer to PL C30000680/C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-08	2025-01-09	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-08T10:05:00.261Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-09T14:15:28.502Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

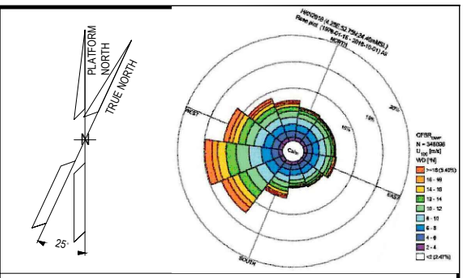
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 36500mm to 47060mm



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-40080	INSTRUMENT LAYOUT - LOWER 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-LOWER 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	ACCEPT 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-40081**

REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

TITLE :

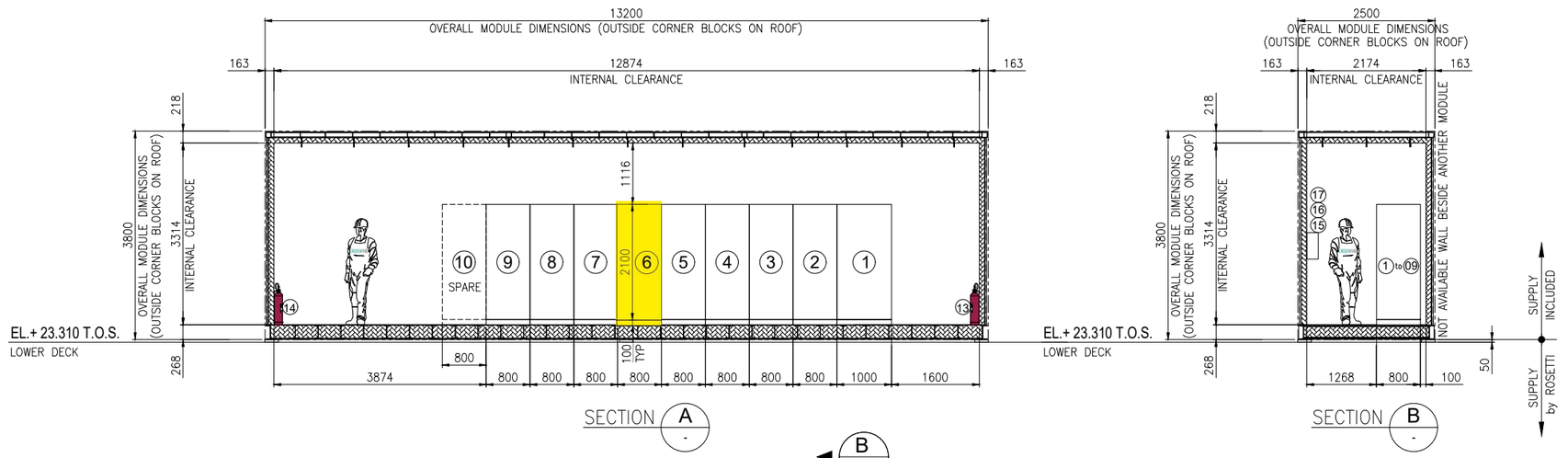
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–UPPER DECK
TOS EL. 30.310M

CONTRACT NO./TITLE CW-1-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–40081	SHEET 003	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV:02.dwg

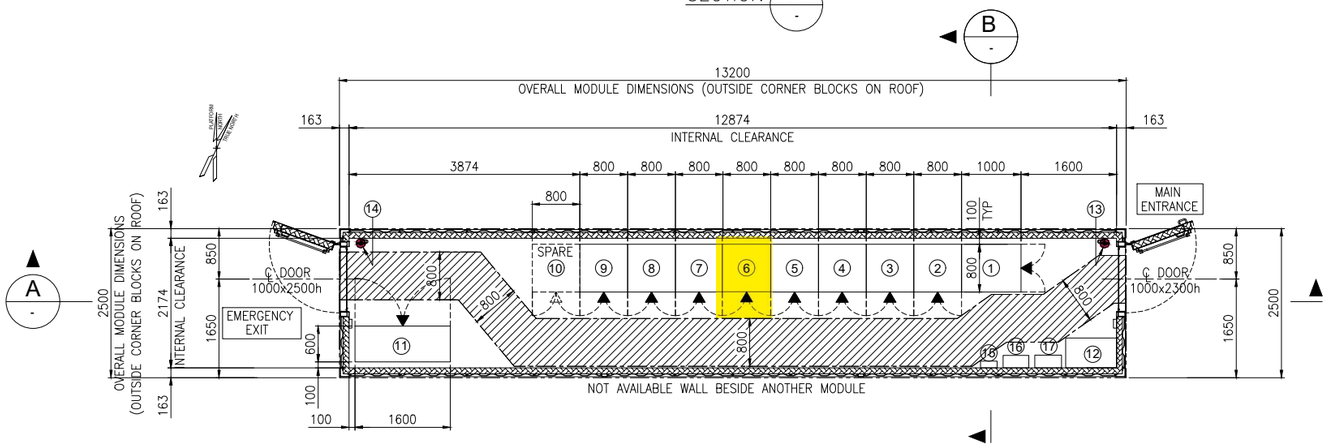
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

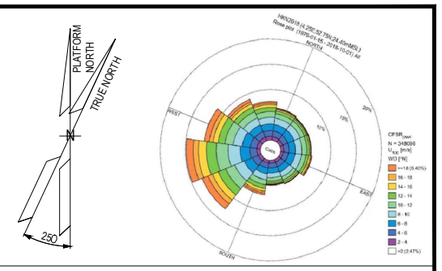
SECTION B -



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

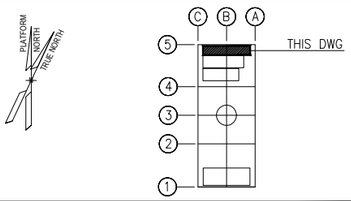
HOLDS

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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)

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD

INSTRUMENTS

<01>

Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02101	1 RD, 3 WH, 2 BK	NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02102	1 RD, 3 WH, 2 BK	NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02103	1 RD, 3 WH, 2 BK	NOTE-2
Note: link between terminals 3, 4 and 12 to be wired on site	950-FDZ-02104	1 RD, 3 WH, 2 BK	NOTE-2
	950-GDZ-02101	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2
	950-GDZ-02102	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2
	950-GDZ-02103	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2
	950-GDZ-02104	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2
	950-GDZ-02105	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2
	950-GDZ-02106	PWR+ RD, 4-20mA WH, PWR- BK	NOTE-2

JUNCTION BOX

950-JE-02101

TB-1

C-950-FDZ-02101/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	1 RD, 2 WH, 3 BK	SH	TR1
C-950-FDZ-02102/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	4 RD, 5 WH, 6 BK	SH	TR2
C-950-FDZ-02103/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	7 RD, 8 WH, 9 BK	SH	TR3
C-950-FDZ-02104/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	10 RD, 11 WH, 12 BK	SH	TR4
C-950-GDZ-02101/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	13 RD, 14 WH, 15 BK	SH	TR5
C-950-GDZ-02102/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	16 RD, 17 WH, 18 BK	SH	TR6
C-950-GDZ-02103/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	19 RD, 20 WH, 21 BK	SH	TR7
C-950-GDZ-02104/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	22 RD, 23 WH, 24 BK	SH	TR8
C-950-GDZ-02105/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	25 RD, 26 WH, 27 BK	SH	TR9
C-950-GDZ-02106/950-JE-02101 3x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS	28 RD, 29 WH, 30 BK	SH	TR10
	SPARE 31 RD, 32 WH, 33 BK	SH	TR11
	SPARE 34 RD, 35 WH, 36 BK	SH	TR12
		OS	

MULTICABLE

No.

950-JE-02101/B400-FGS-003

~~950-JE-02101/B400-FGS-002~~

12x3x2.5mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

~~B400-FGS-002~~

B400-FGS-003

TB-950-JE-02101

TR1	1 RD, 2 WH, 3 BK	950-FDZ-02101
TR2	4 RD, 5 WH, 6 BK	950-FDZ-02102
TR3	7 RD, 8 WH, 9 BK	950-FDZ-02103
TR4	10 RD, 11 WH, 12 BK	950-FDZ-02104
TR5	13 RD, 14 WH, 15 BK	950-GDZ-02101
TR6	16 RD, 17 WH, 18 BK	950-GDZ-02102
TR7	19 RD, 20 WH, 21 BK	950-GDZ-02103
TR8	22 RD, 23 WH, 24 BK	950-GDZ-02104
TR9	25 RD, 26 WH, 27 BK	950-GDZ-02105
TR10	28 RD, 29 WH, 30 BK	950-GDZ-02106
TR11	31 RD, 32 WH, 33 BK	SPARE
TR12	34 RD, 35 WH, 36 BK	SPARE

Shield Bar

I.E.

Shield Bar

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_N	06/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT-FGS WIRING DIAGRAMS
950-JE-02101

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

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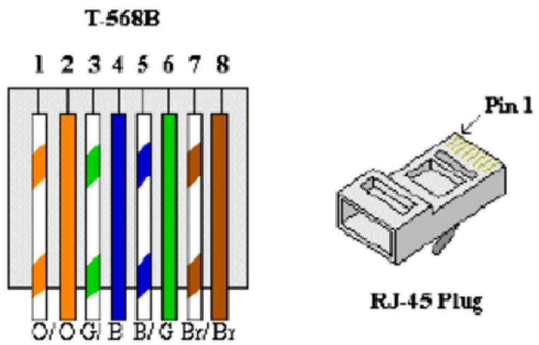
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DRAWING NO. 123A90-DDL-IN-DG-40015

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



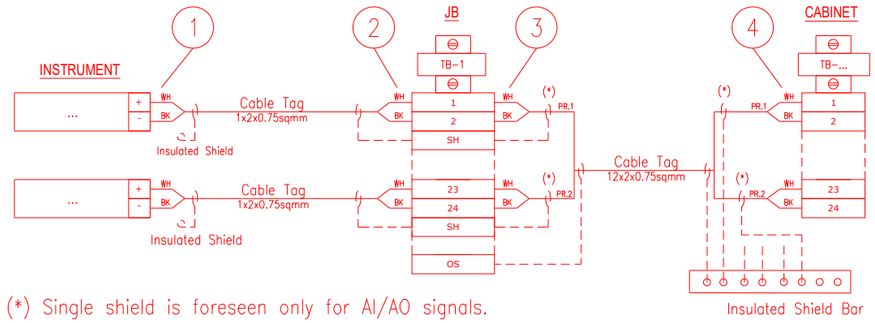
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

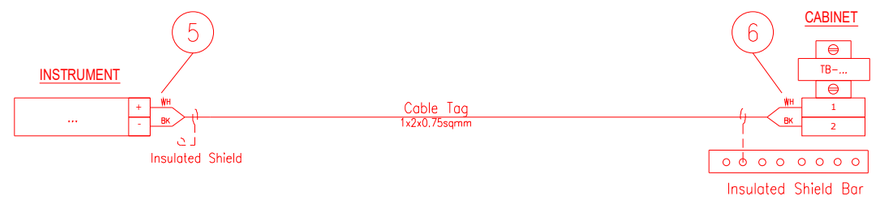
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

PHILOSOPHY OF CROSS-FERRULING:

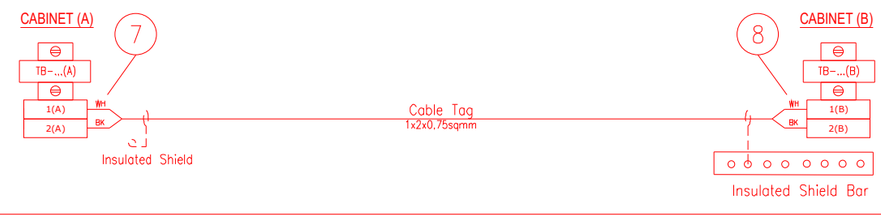
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



INSTRUMENT CONNECTION STRAIGHT TO CABINET



CABINET CONNECTION TO CABINET



1 - INSTR. TERMINAL NO. OR POLARITY / JB TAG / JB TERMINAL NO.
2 - INSTR. TERMINAL NO. OR POLARITY / INSTR. TAG / JB TERMINAL NO.
3 - JB TERMINAL NO. / JB TERMINAL STRIP / CABINET TERMINAL STRIP / PAIR OR CORE NO.
4 - PAIR OR CORE NO. / JB TAG / JB TERMINAL NO. / CABINET TERMINAL STRIP / CABINET TERMINAL NO.
5 - INSTR. TERMINAL NO. OR POLARITY / CABINET TAG / CABINET TERMINAL STRIP / CABINET TERMINAL NO.
6 - INSTR. TERMINAL NO. OR POLARITY / INSTR. TAG / CABINET TERMINAL STRIP/ CABINET TERMINAL NO.
7 - TERMINAL NO. (A) / TERMINAL STRIP (A) / CABINET TAG (B) / CABINET TERMINAL NO. (B) / PAIR OR CORE NO.
8 - PAIR OR CORE NO. / CABINET TERMINAL NO. (A) / CABINET TAG (A) / TERMINAL STRIP (B) / TERMINAL NO. (B)

NOTES: A - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
HEAT SHRINKABLE BLUE FOR SHIELD OF IS INSTRUMENT CABLE.
B - ABOVE DESCRIBED PHILOSOPHY IS INTENDED FOR CONNECTION AS REPRESENTED:
IN CASE OF CONNECTION FROM THE OPPOSITE SIDE, ORDER OF FERULE TAG SHALL BE MIRRORED.
C - SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO SHIELDS TERMINATED ON TERMINAL STRIP.

REFERENCE DRAWINGS:

PIPING AND INSTRUMENT DIAGRAM 123A90-DDL-PR-PID-80009
INSTRUMENT INDEX 123A90-DDL-IN-LIS-40088
F&G DETECTORS LAYOUT 123A90-DDL-SAF-DL-30027

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_N	06/12/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

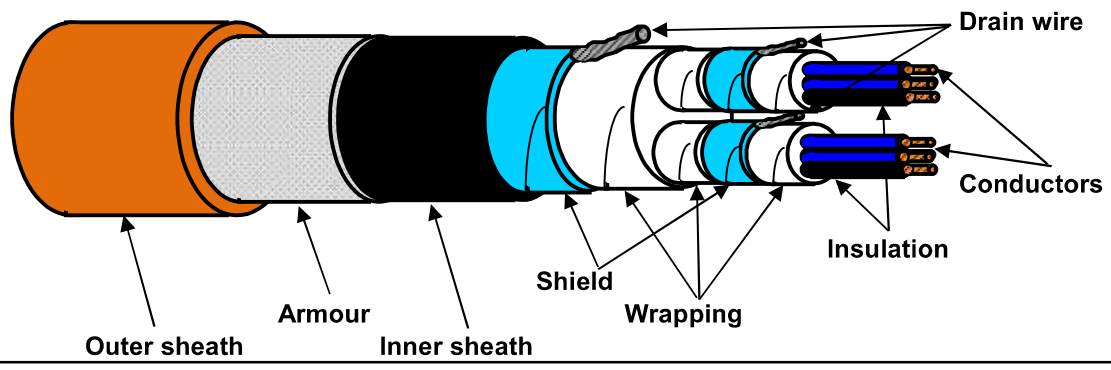
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

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

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

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

12X3X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Red - White - Black (each core NUMBERED for TRIAD identification)**	
Triad Assembling :	7/1mt	
Triad Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Triad 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 :	2/1mt	
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 1,0 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 2,1 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 2,4 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 12X3X2,5 SQMM - MGT/XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(37,3 ± 10%) mm	
Over armour diameter :	(38,9 ± 10%) mm	
Outer diameter :	(43,7 ± 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 :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 60 μH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
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			

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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
950-JE-02101/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-JE-02101	AI JB to FGS	Upper Deck	B400-FGS-003	Marshalling FGS	Lower Deck (B-400)	SMICV16-12X3X2,5	Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 12x3x2,5mm² - Orange	M50	T2_M50_Double			n.a.				U-SEC-6 / U-SEC-1E / U-SEC-1D / U-SEC-1C / U-SEC-1B / U-SEC-1A / L-SEC-2O / L-SEC-1BB / L-SEC-1BA / B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F / I-MCT-403

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