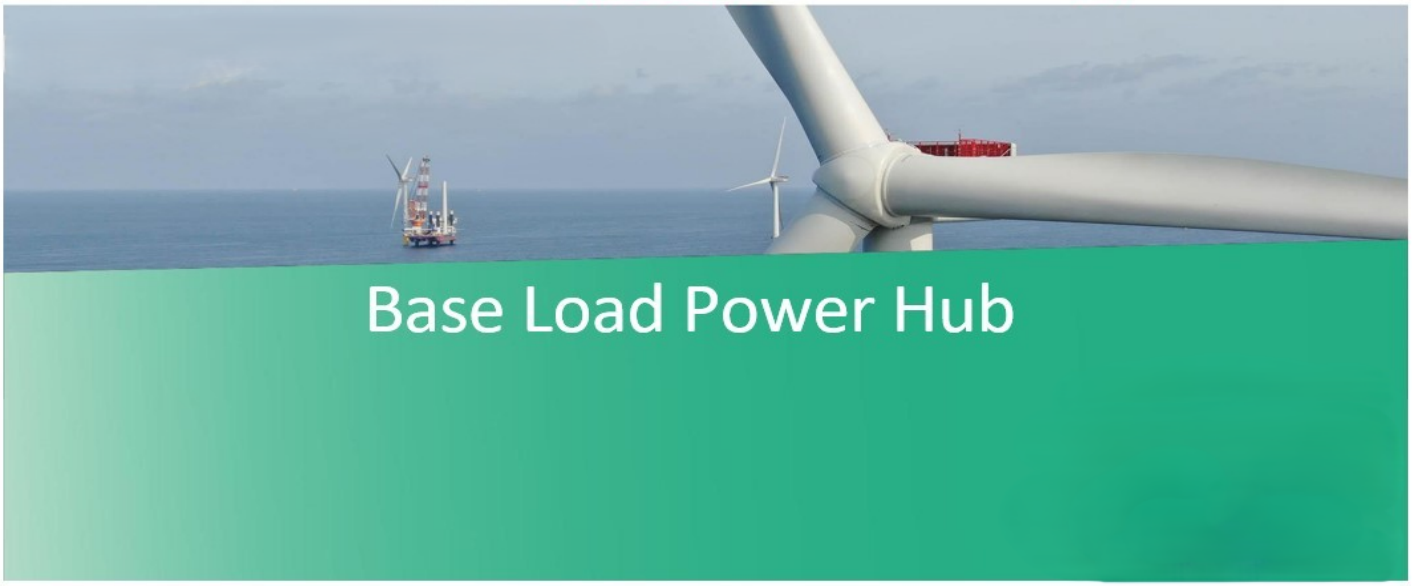
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	70 Safety and Facility Systems
SUBSYSTEM	70-18 F&G Devices FZ-07 (Transition Piece Area)

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

Sub System N°:	70-18	Tick as appropriate	ONSHORE	O
Description:	F&G Devices FZ-07 (Transition Piece Area)		OFFSHORE	NA

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

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

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

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE	●	PARTIAL	

Revision:	1		Issued on:	2025-05-05	
System:	70	/	Safety and Facility Systems		
SubSystem:	70-18	/	F&G Devices FZ-07 (Transition Piece Area)		

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

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A 0'	B 5

REMARKS: ONSHORE SOW completed, n. 1 outstanding tasks to be cleared in OFFSHORE phase.

	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	2025-05-06	2025-05-12	2025-05-12	2025-05-12
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-05-06T09:49:45.664Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-12T08:13:13.090Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-12T09:20:11.072Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-12T09:20:18.230Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-18 & process: MC

Instrumental	70-18 F&G Devices FZ-07 (Transition Piece Area)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-MFA-07101	FZ-07 MFA Activation	ONSHORE	C10001072	CJX00	100	2025-04-29	RFC 1
950-XL-07101	FZ-07 Gas Beacon Activation	ONSHORE	C10001126	CJX00	100	2025-04-30	RFC 1
950-XL-07102	FZ-07 Fire Beacon Activation	ONSHORE	C10001127	CJX00	100	2025-04-30	RFC 1
950-XZ-07101	FZ-07 Sounder Activation	ONSHORE	C10001144	CJX00	100	2025-04-30	RFC 1
C-950-MFA-07101/B400-FGS-003	MANUAL FIRE ALARM / MARSHALLING PCS	ONSHORE	C10000397	CJX10	100	2025-02-19	-
		OFFSHORE	C10004676	CJX10	0	-	-
C-950-XL-07101/950-JE-07101	BEACON / MARSHALLING PCS	ONSHORE	C10000349	CJX10	100	2025-04-30	RFC 1
C-950-XL-07102/950-JE-07101	BEACON / MARSHALLING PCS	ONSHORE	C10000350	CJX10	100	2025-04-30	RFC 1
C-950-XZ-07101/950-JE-07101	SOUNDER / MARSHALLING PCS	ONSHORE	C10000348	CJX10	100	2025-04-30	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-18	F&G Devices FZ-07 (Transition Piece Area)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004026	B	C-950-MFA-07101/B400-FGS-003	Missing cable tag SS , near the instrument.	.		APolo 2025-02-19	2025-03-03	JKrizanic 2025-03-03	2025-03-03
C30004027	B	C-950-MFA-07101/B400-FGS-003	Missing core identification tag. side B400-FGS-003 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-02-19	2025-02-26	APolo 2025-02-26	2025-02-26
C30004028	B	C-950-MFA-07101/B400-FGS-003	Missing cables tag , Panel side B400-FGS-003	.		APolo 2025-02-19	2025-02-27	AAndreani 2025-02-27	2025-02-27
C30004341	B	950-MFA-07101 C10001072	Painting is damage on the instrument. (See attached photo)	.		Gtangianu 2025-04-29			
C30004342	B	950-MFA-07101 C10001072	Missing trafolite tag. (950-MFA-07101).	.		Gtangianu 2025-04-29			
C30004346	B	950-XL-07101 C10001126	The painting is damage.See attached photo	.		Gtangianu 2025-04-30			
C30004347	B	950-XL-07101 C10001126	Missing protect cage on top lamp.See attached photo.	.		Gtangianu 2025-04-30			
C30004348	B	950-XZ-07101 C10001144	Painting is damage. See attached photo.	.		Gtangianu 2025-04-30			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	70	Safety and Facility Systems
SUBSYSTEM	70-18	F&G Devices FZ-07 (Transition Piece Area)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004026	B	C-950-MFA-07101/B400-FGS-003	Missing cable tag SS , near the instrument.	.		APolo 2025-02-19	2025-03-03	JKrizanic 2025-03-03	2025-03-03
C30004027	B	C-950-MFA-07101/B400-FGS-003	Missing core identification tag. side B400-FGS-003 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-02-19	2025-02-26	APolo 2025-02-26	2025-02-26
C30004028	B	C-950-MFA-07101/B400-FGS-003	Missing cables tag , Panel side B400-FGS-003	.		APolo 2025-02-19	2025-02-27	AAndreani 2025-02-27	2025-02-27
C30004341	B	950-MFA-07101 C10001072	Painting is damage on the instrument. (See attached photo)	.		Gtangianu 2025-04-29	2025-05-21	Gtangianu 2025-05-21	2025-05-21
C30004342	B	950-MFA-07101 C10001072	Missing trafolite tag. (950-MFA-07101).	.	Trafolyte tag installed.	Gtangianu 2025-04-29	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10
C30004346	B	950-XL-07101 C10001126	The painting is damage.See attached photo	.		Gtangianu 2025-04-30	2025-05-21	Gtangianu 2025-05-21	2025-05-21
C30004347	B	950-XL-07101 C10001126	Missing protect cage on top lamp.See attached photo.	.		Gtangianu 2025-04-30	2025-05-14	Gtangianu 2025-05-14	2025-05-14
C30004348	B	950-XZ-07101 C10001144	Painting is damage. See attached photo.	.		Gtangianu 2025-04-30	2025-05-21	Gtangianu 2025-05-21	2025-05-21

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004026

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000397	1.4 Discipline	Instrumental
1.2 Item	C-950-MFA-07101/B400-FGS-003	MANUAL FIRE ALARM / MARSHALLING PCS	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Missing cable tag SS , near the instrument.

Name: Alessio Polo

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

FG-22
-050-MFA-0710101-FGS-003

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004027

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000397	1.4 Discipline	Instrumental
1.2 Item	C-950-MFA-07101/B400-FGS-003	MANUAL FIRE ALARM / MARSHALLING PCS	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Missing core identification tag. side B400-FGS-003 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

TB-B400-FGS-002-1
MFA-04202/TB-B400-FGS-002-1/6

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004028

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000397	1.4 Discipline	Instrumental
1.2 Item	C-950-MFA-07101/B400-FGS-003	MANUAL FIRE ALARM / MARSHALLING PCS	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Missing cables tag , Panel side B400-FGS-003

Name: Alessio Polo

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
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

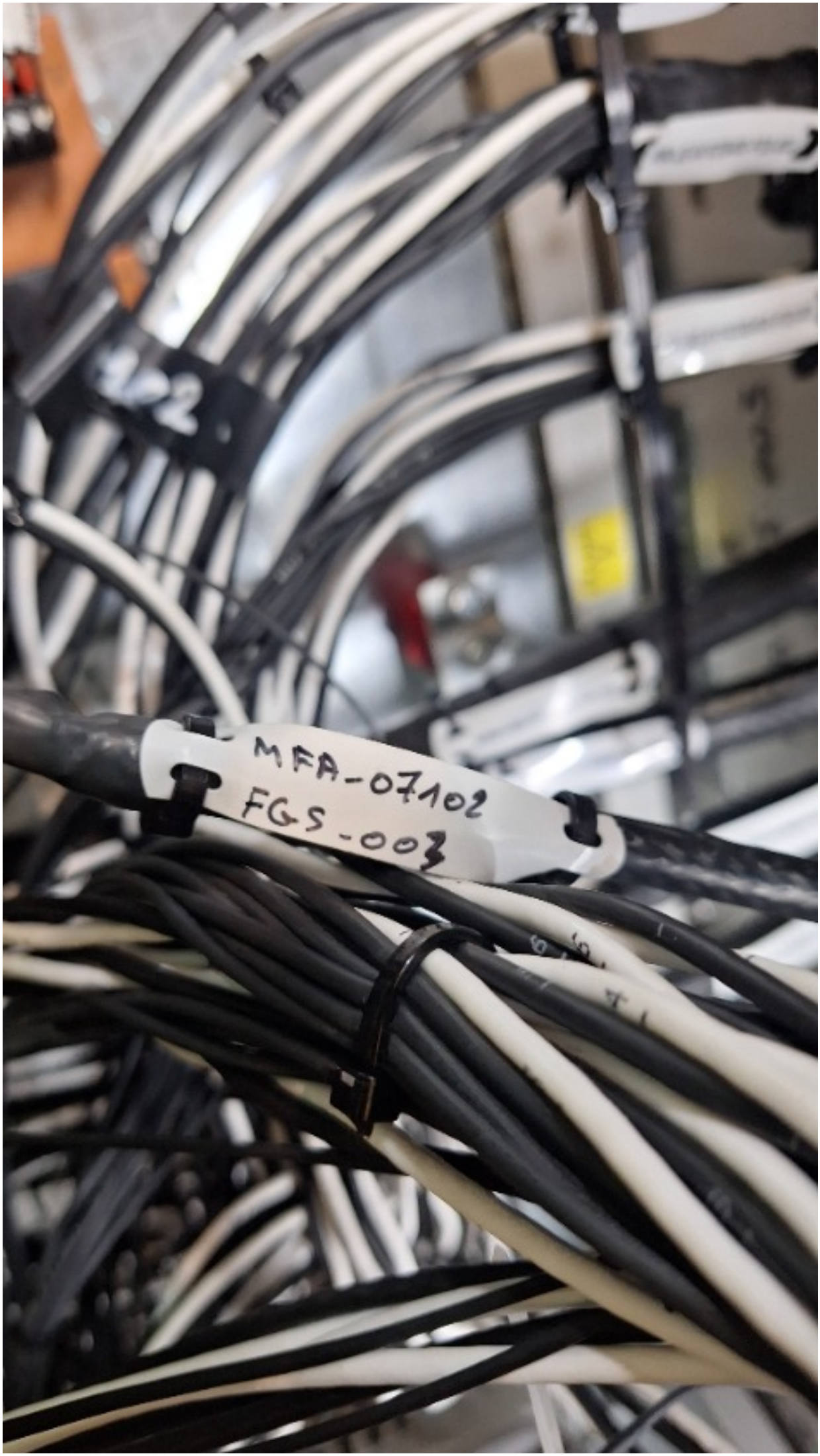
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


MFA-07102
FGS-003

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004341

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001072	1.4 Discipline	Instrumental
1.2 Item	950-MFA-07101	FZ-07 MFA Activation	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Painting is damage on the instrument. (See attached photo)

Name: Giovanni Tangianu

Date: 2025-04-29

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	2025-04-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Paint has been restored

Name: Giovanni Tangianu

Date: 2025-05-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


MANUAL FIRE ALARM ACTIVATION
950-MFA-07101
LIFT
FLAP
AND
PUSH

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004342

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001072	1.4 Discipline	Instrumental
1.2 Item	950-MFA-07101	FZ-07 MFA Activation	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Missing trafolite tag. (950-MFA-07101).

Name: Giovanni Tangianu

Date: 2025-04-29

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	2025-04-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Trafolyte tag installed.

Name: Raffaele Degli Esposti

Date: 2025-07-10

Signature:

5 - CLEARANCE CHECK

Paint has been restored

Name: Raffaele Degli Esposti

Date: 2025-07-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-07-10

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004346

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001126	1.4 Discipline	Instrumental
1.2 Item	950-XL-07101	FZ-07 Gas Beacon Activation	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

The painting is damage.See attached photo

Name: Giovanni Tangianu

Date: 2025-04-30

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	2025-04-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Paint has been restored

Name: Giovanni Tangianu

Date: 2025-05-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


CE
MEDCO
IP66/67
EXPLOSIVE
PASSED



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004347

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001126	1.4 Discipline	Instrumental
1.2 Item	950-XL-07101	FZ-07 Gas Beacon Activation	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Missing protect cage on top lamp.See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-30

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	2025-04-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-05-14

Signature:

5 - CLEARANCE CHECK

The cage was installed. See attached photo.

Name: Giovanni Tangianu

Date: 2025-05-14

Signature:

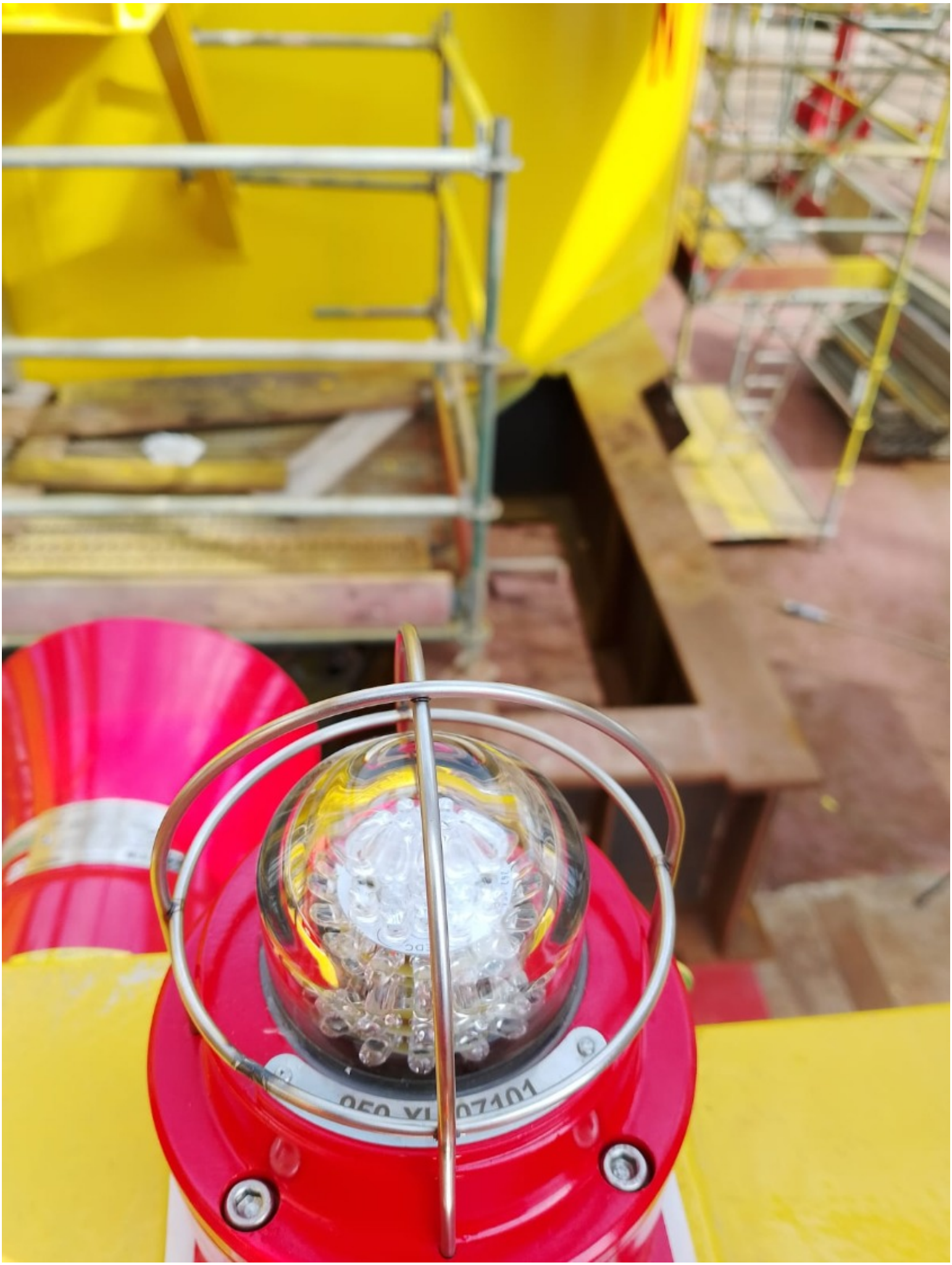
6- CLEARANCE APPROVAL

Name:

Date: 2025-05-14

Signature:


ISS. E
950-XL-07101



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004348

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001144	1.4 Discipline	Instrumental
1.2 Item	950-XZ-07101	FZ-07 Sounder Activation	
1.3 Subsystem	70-18	F&G Devices FZ-07 (Transition Piece Area)	

2 - OBSERVATION

Painting is damage. See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-30

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	2025-04-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Paint has been restored

Name: Giovanni Tangianu

Date: 2025-05-21

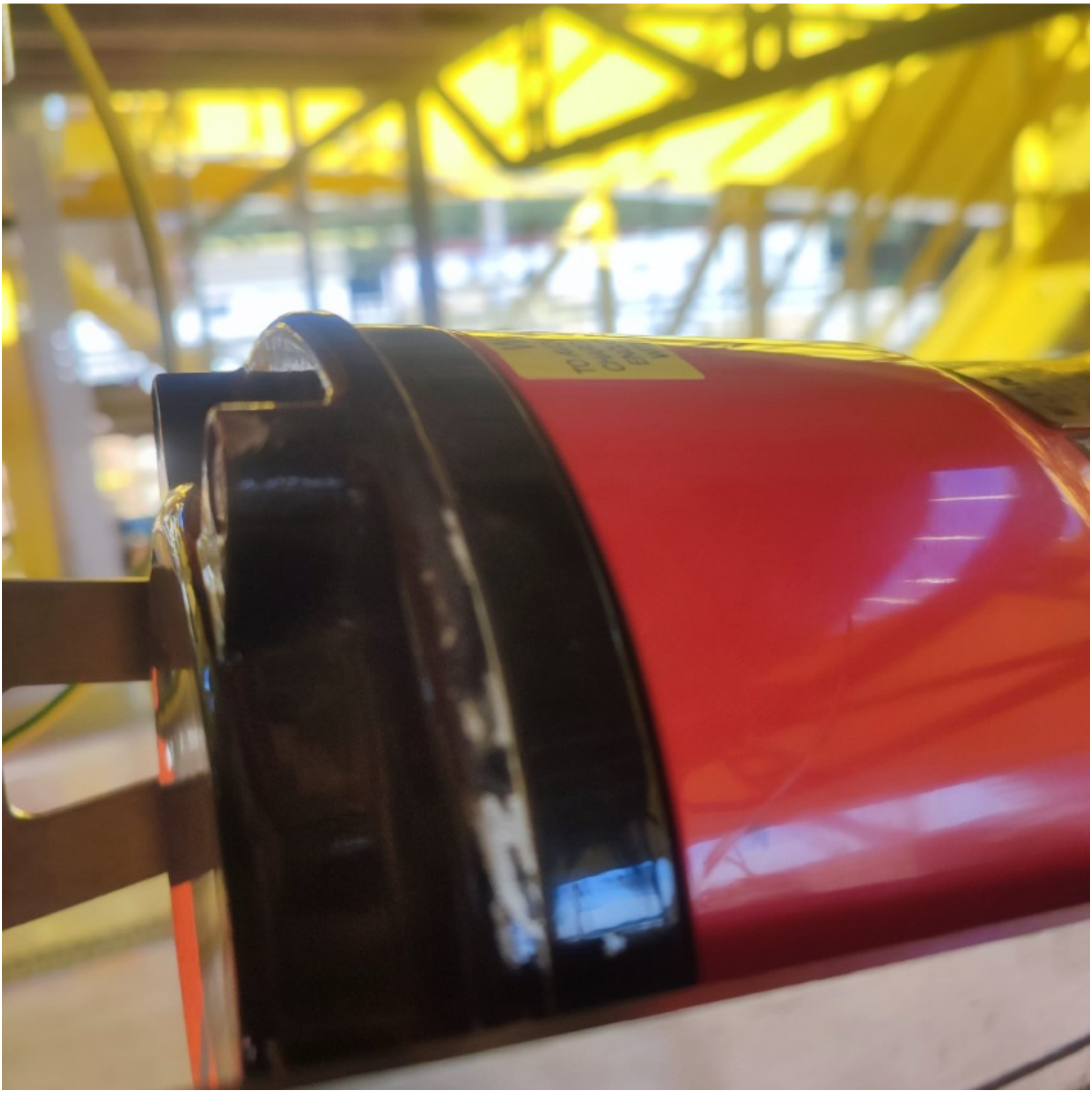
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



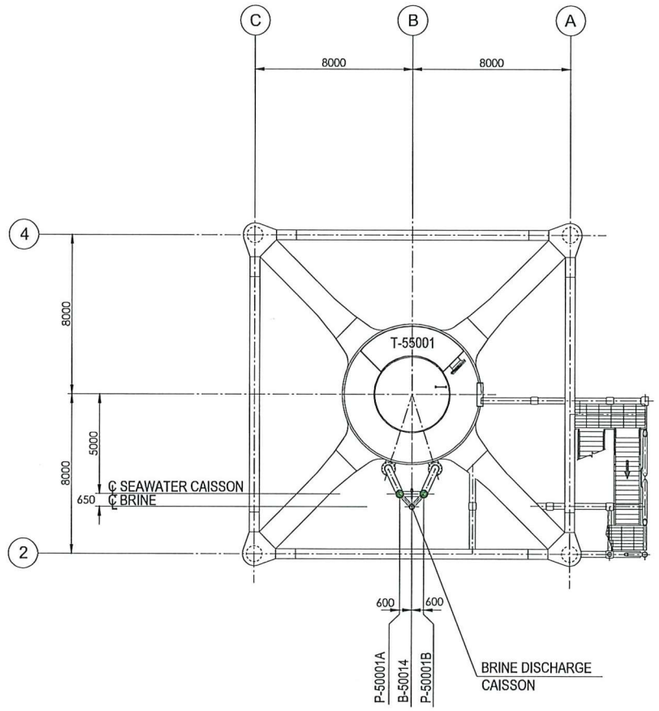

950-XZ-07101


WARNING
TO AVOID ELECTRO-STATIC
CHARGE BUILD UP, CLEAN
ENCLOSURE EXTERIOR
WITH A DAMP CLOTH

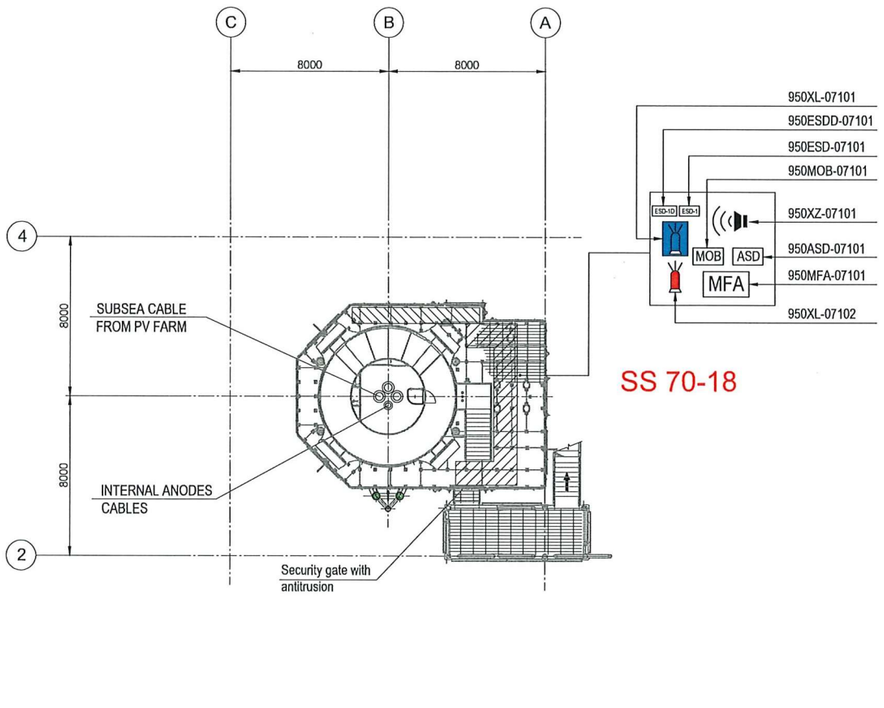
Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

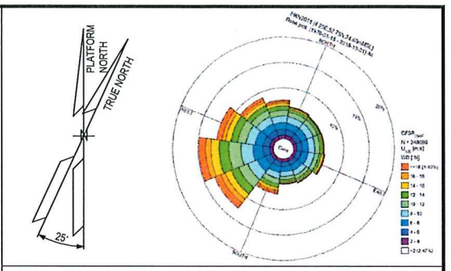


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

NOT APPLICABLE

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-18 & process: MC & discipline : I

Instrumental	70-18 F&G Devices FZ-07 (Transition Piece Area)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-MFA-07101	FZ-07 MFA Activation	ONSHORE	C10001072	CJX00	100	2025-04-29	RFC 1
950-XL-07101	FZ-07 Gas Beacon Activation	ONSHORE	C10001126	CJX00	100	2025-04-30	RFC 1
950-XL-07102	FZ-07 Fire Beacon Activation	ONSHORE	C10001127	CJX00	100	2025-04-30	RFC 1
950-XZ-07101	FZ-07 Sounder Activation	ONSHORE	C10001144	CJX00	100	2025-04-30	RFC 1
C-950-MFA-07101/B400-FGS-003	MANUAL FIRE ALARM / MARSHALLING PCS	ONSHORE	C10000397	CJX10	100	2025-02-19	-
		OFFSHORE	C10004676	CJX10	0	-	-
C-950-XL-07101/950-JE-07101	BEACON / MARSHALLING PCS	ONSHORE	C10000349	CJX10	100	2025-04-30	RFC 1
C-950-XL-07102/950-JE-07101	BEACON / MARSHALLING PCS	ONSHORE	C10000350	CJX10	100	2025-04-30	RFC 1
C-950-XZ-07101/950-JE-07101	SOUNDER / MARSHALLING PCS	ONSHORE	C10000348	CJX10	100	2025-04-30	RFC 1

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-950-XZ-07101/950-JE-07101	:	SOUNDER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	70-18	:	F&G Devices FZ-07 (Transition Piece Area)	Module	TP	
TASK	code	C10000348	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-OS-LSZH-SWB-LSZH	Cores/Size mm²	2X2,5 mm2	Color	ORANGE
From	950-XZ-07101	To	950-JE-07101		

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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
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	0,2	Ω
	SCREEN	0,2	Ω
	EARTH	NA	Ω
	ARMr	0,2	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

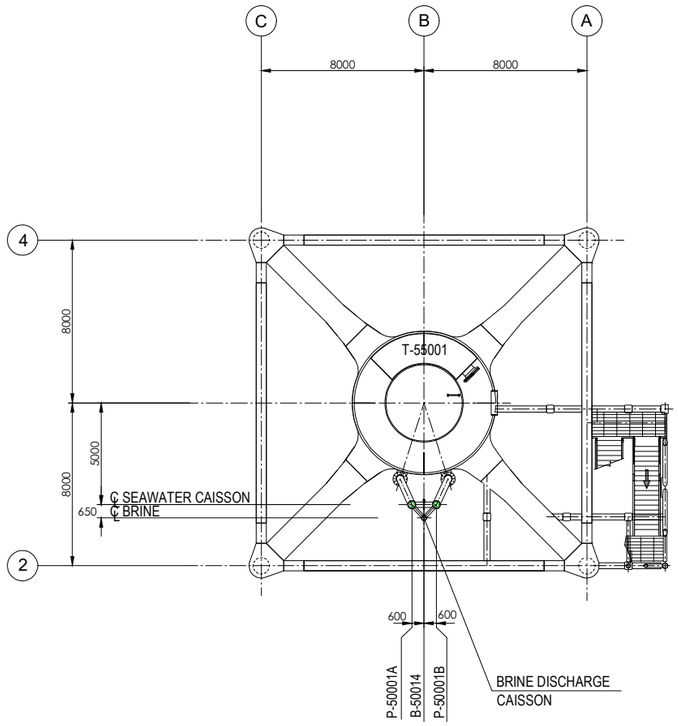
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments

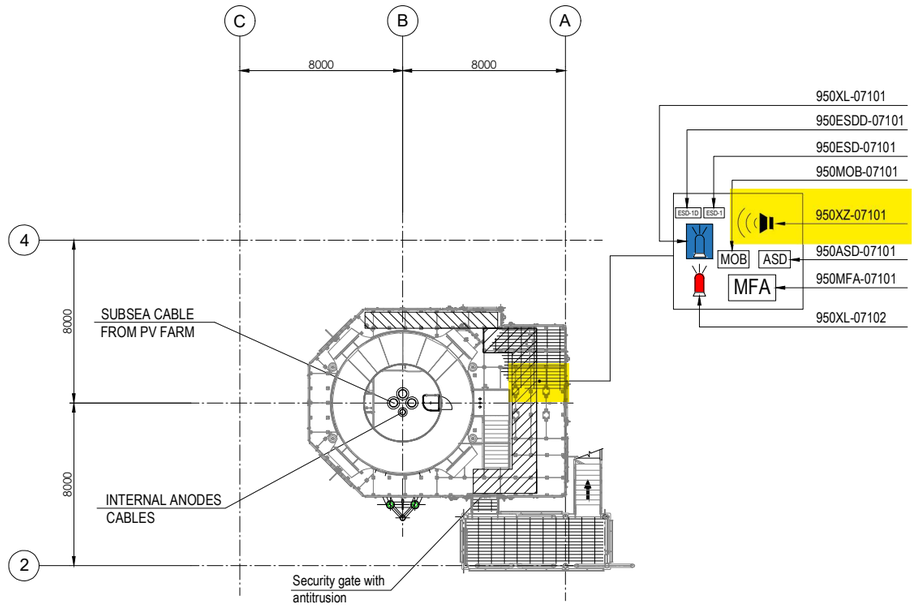
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-17	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-17T20:29:13.630Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:07:54.818Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

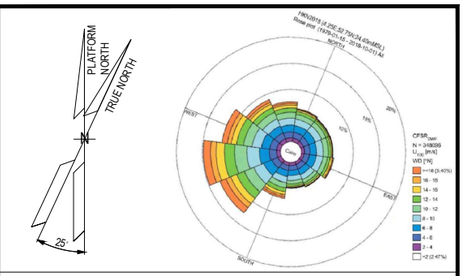
REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
01	123A90-DDL-SAP-RE-30020	FERA REPORT

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

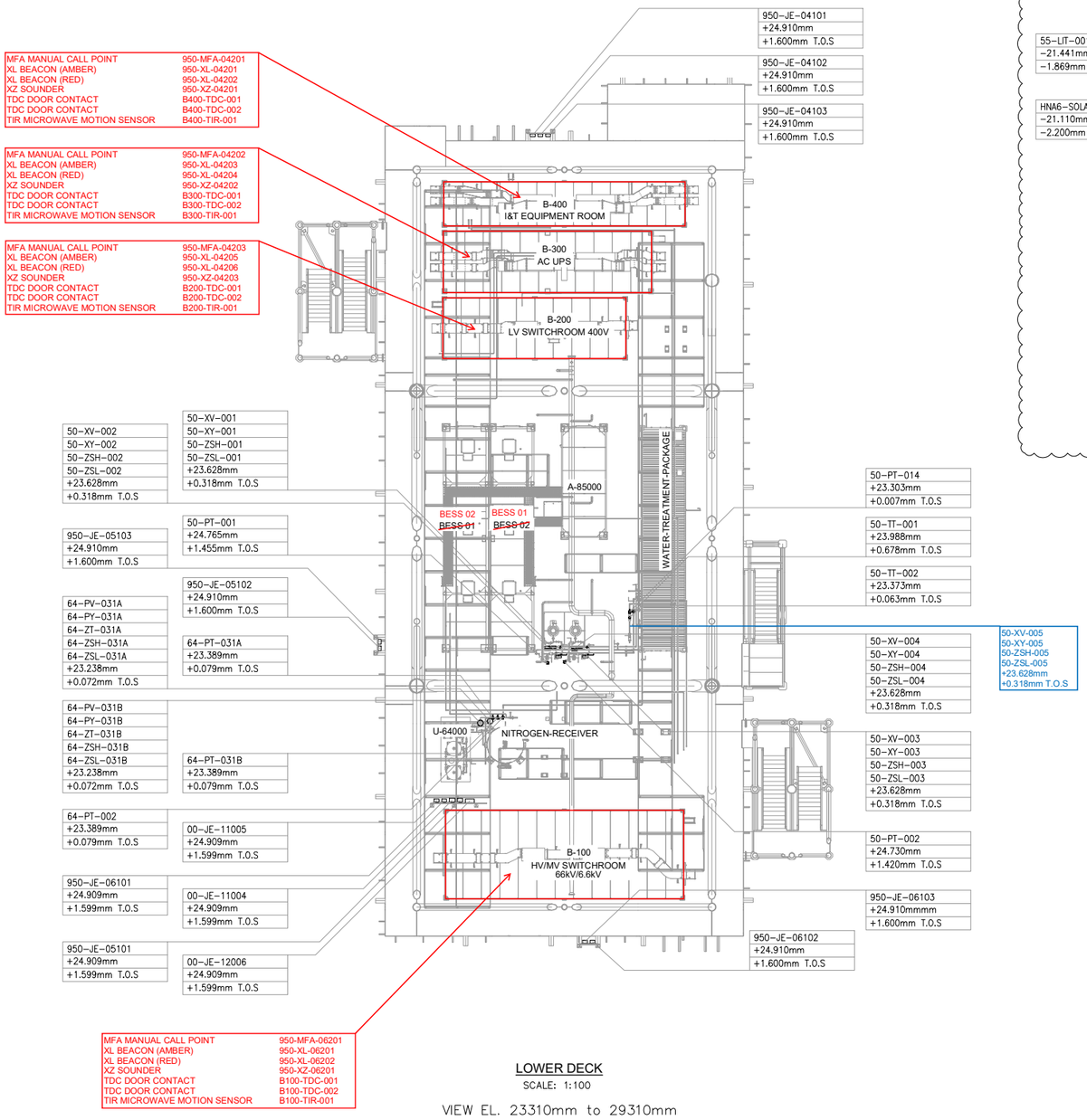
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

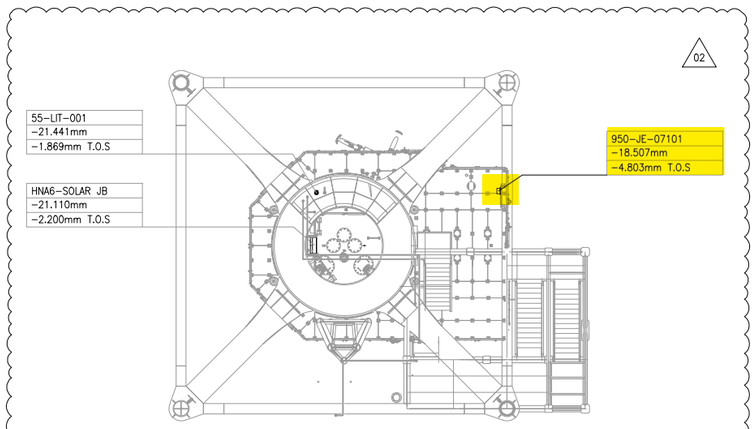
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DRAWING NO. 123A90-DDL-IN-DL-40080

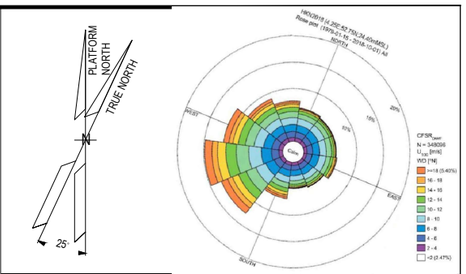
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
2_C	06/11/24	G.Randi

ROSETTI MARINO SpA

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

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

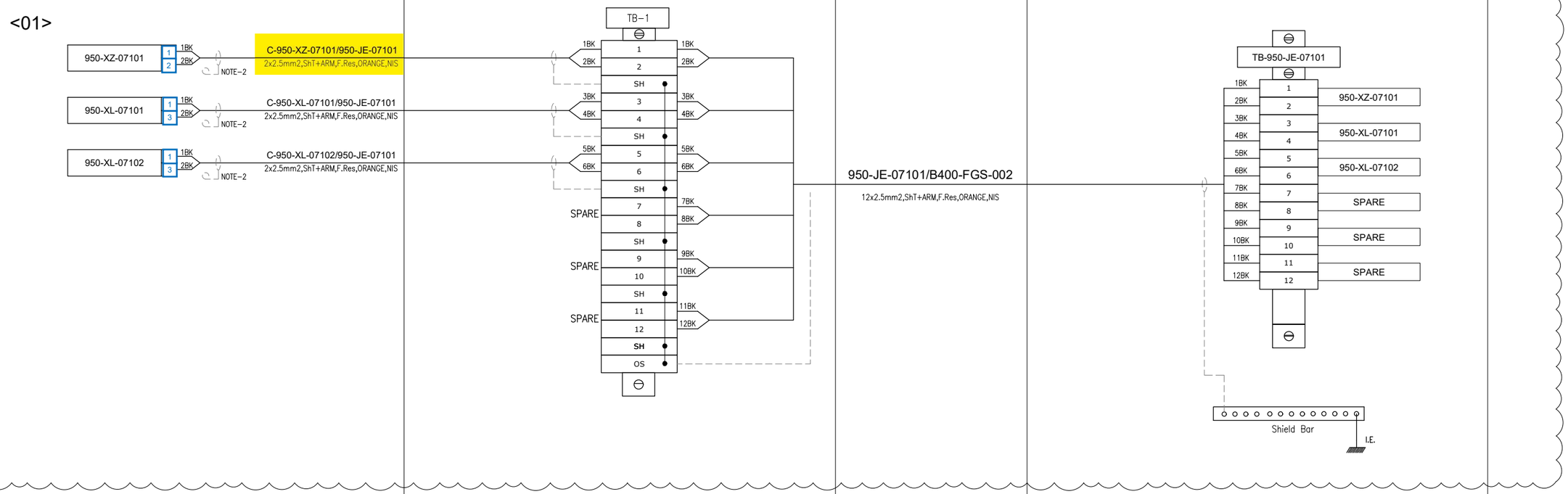
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DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>



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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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 074	REV. 01

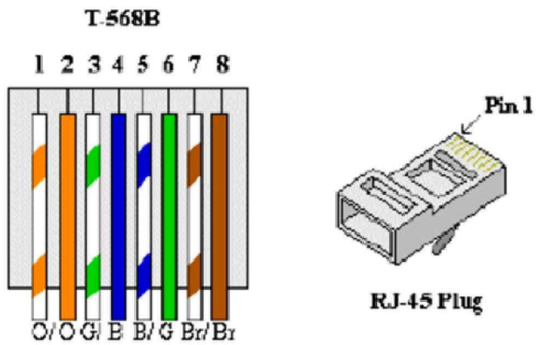
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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

REV. 01

NOTES:

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



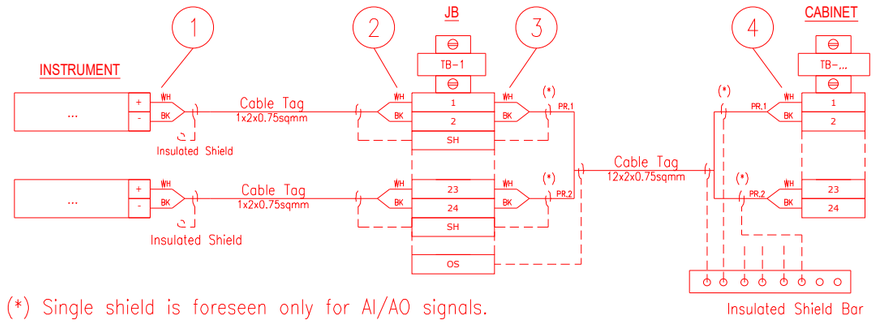
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

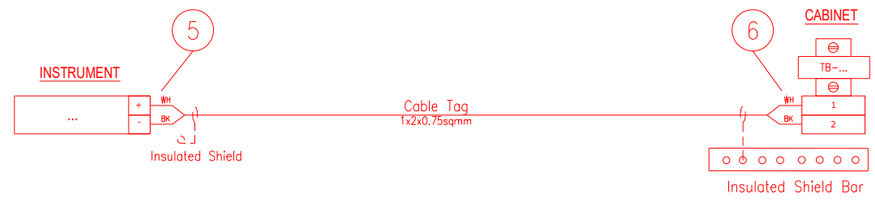
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

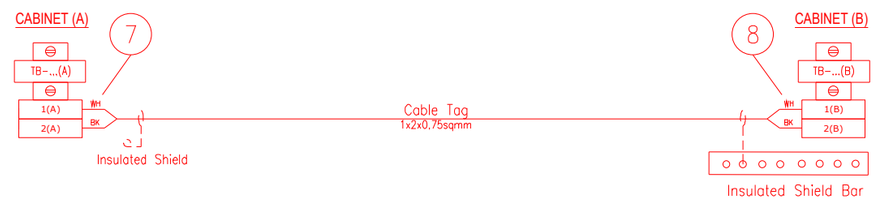
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_S	13/03/25	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

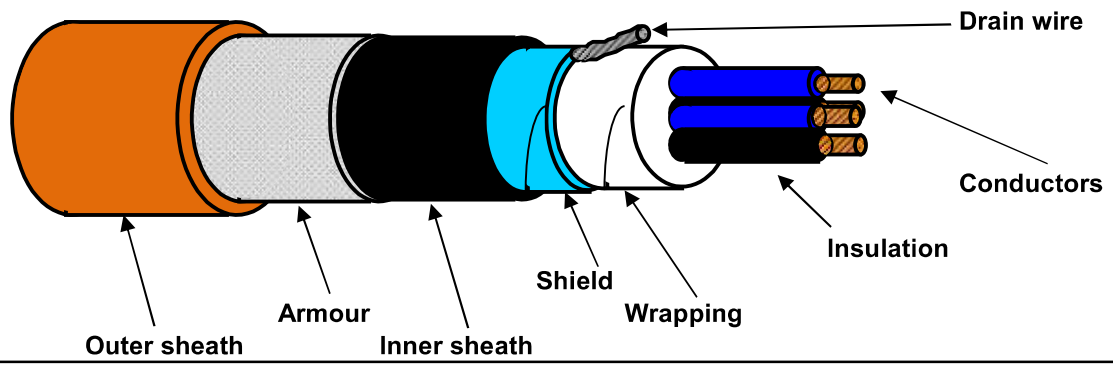
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	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functi	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
C-950-XZ-07101/950-JE-07101	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-XZ-07101	Sounder	Below Lower Deck	950-JE-07101	DO JB to FGS	Transition Piece	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				T-SEC-02

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

2X2,5 - 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 :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
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 1,1 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 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/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 :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 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)	
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			

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

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ROSETTI MARINO | CROSSWIND

ITEM	Tag	C-950-XL-07101/950-JE-07101	:	BEACON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	70-18	:	F&G Devices FZ-07 (Transition Piece Area)	Module	TP	
TASK	code	C10000349	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-OS-LSZH-SWB-LSZH	Cores/Size mm²	2X2,5 mm2	Color	ORANGE
From	950-XL-07101	To	950-JE-07101		

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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
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	0,2	Ω
	SCREEN	0,2	Ω
	EARTH	NA	Ω
	ARMr	0,2	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

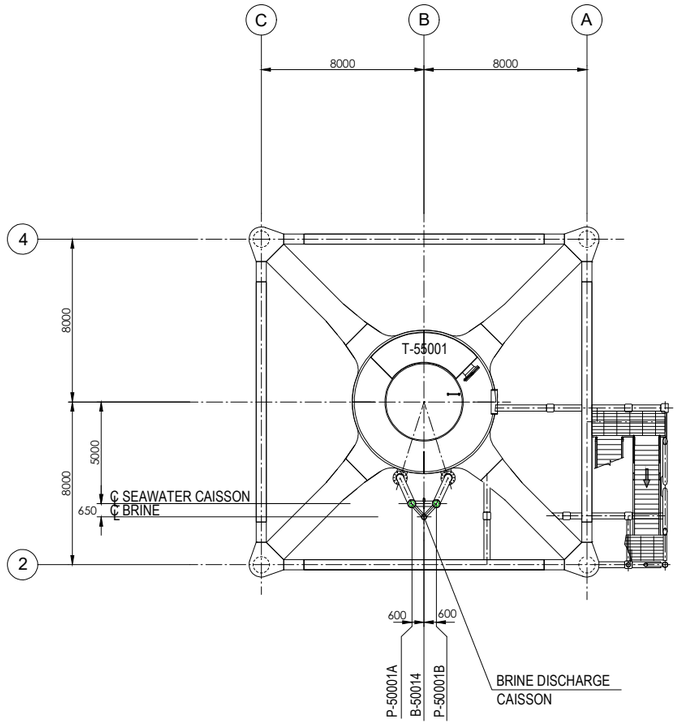
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments

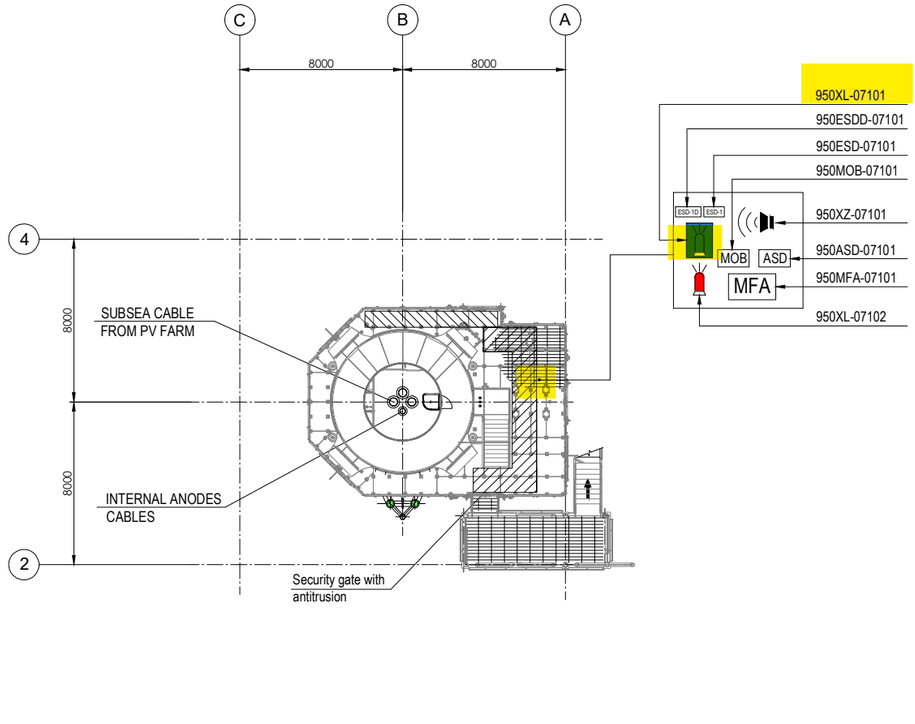
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T05:55:30.692Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:08:32.587Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

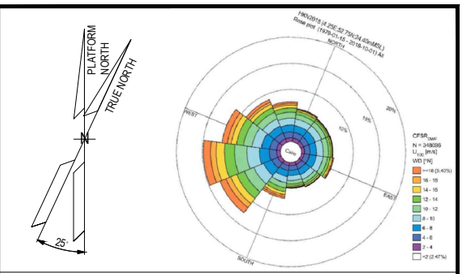


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

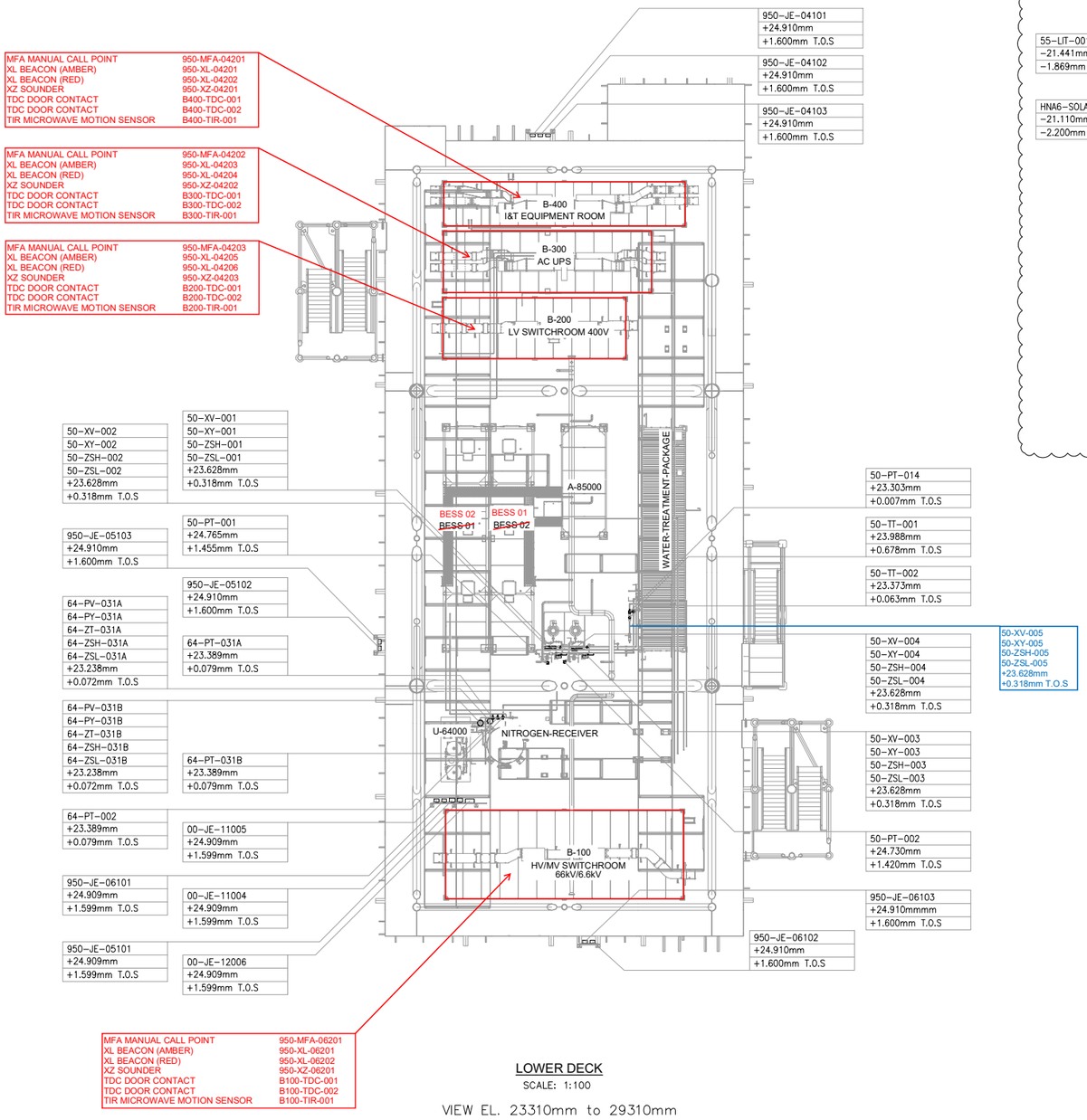
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

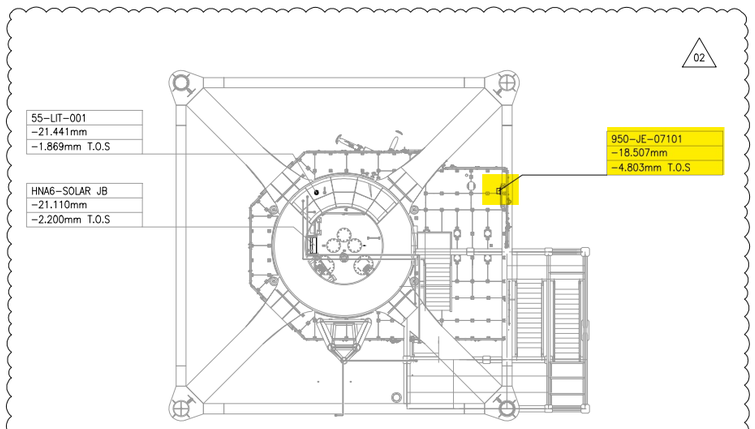
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DRAWING NO. 123A90-DDL-IN-DL-40080

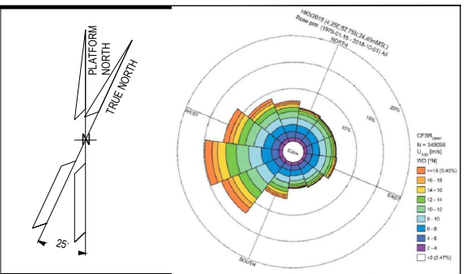
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
2_C	06/11/24	G.Randi

ROSETTI MARINO SpA

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

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

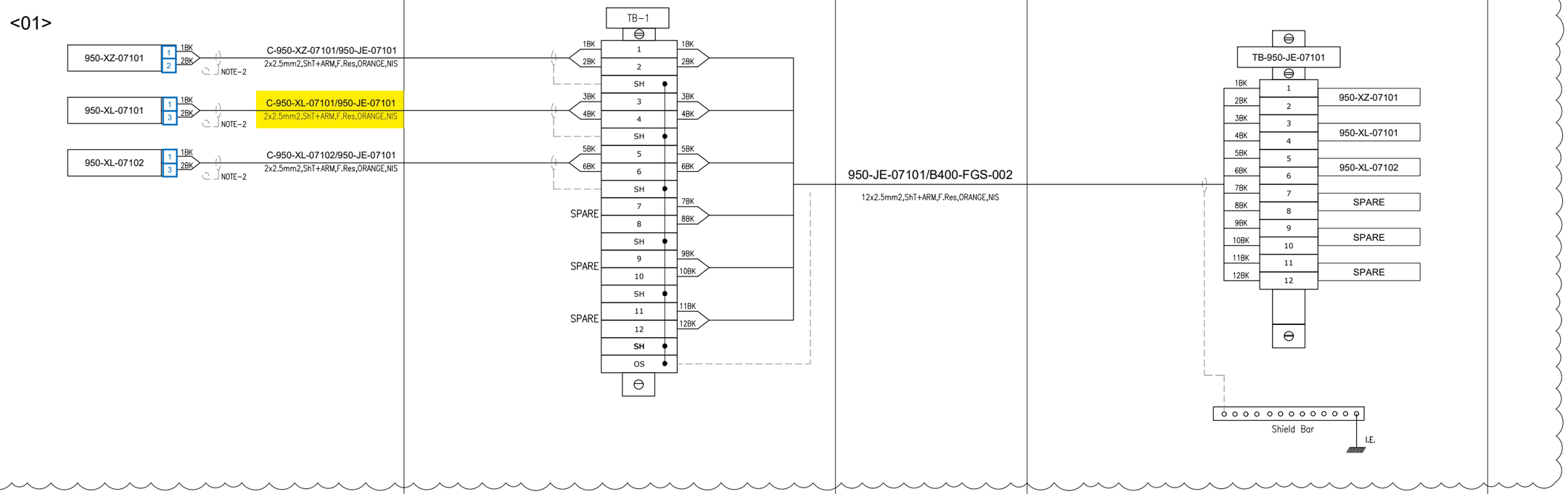
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DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>



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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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 074	REV. 01

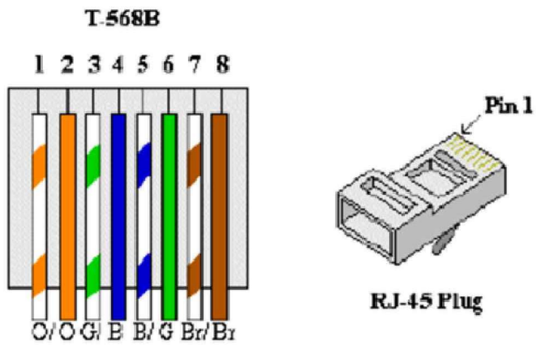
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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

REV. 01

NOTES:

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



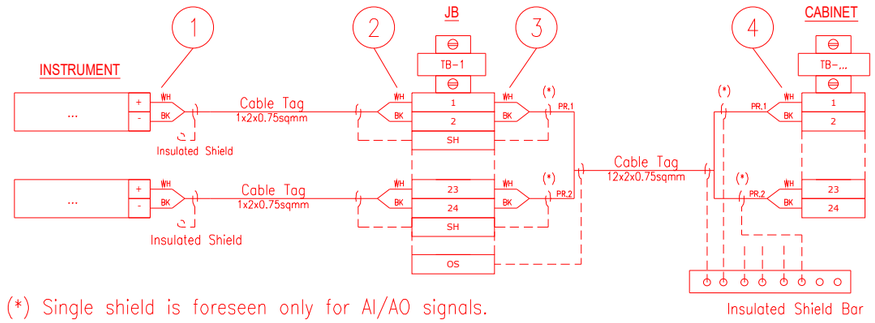
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

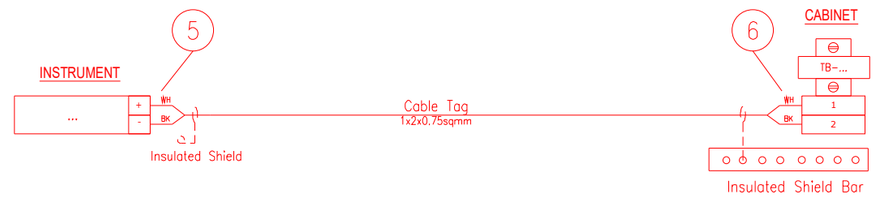
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

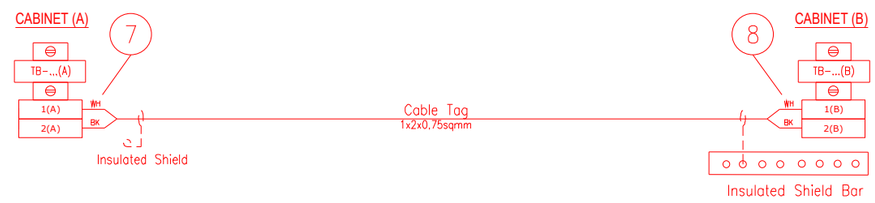
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_S	13/03/25	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

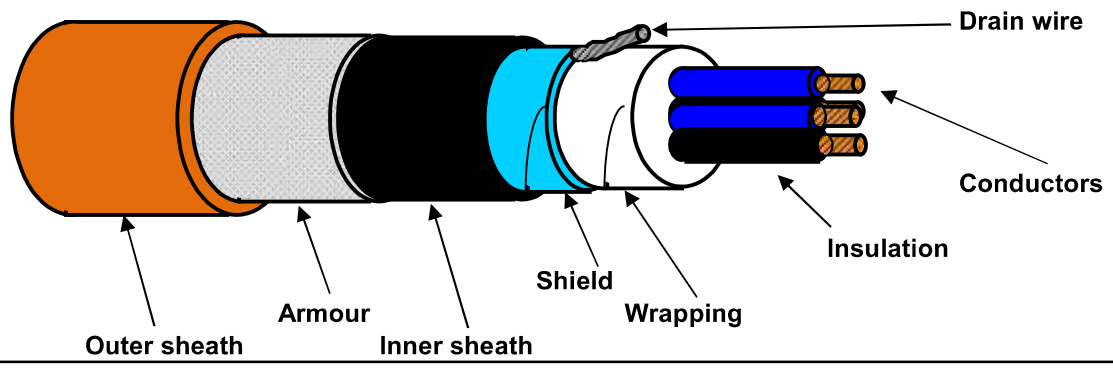
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	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
C-950-XL-07101/950-JE-07101	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-XL-07101	Flash Beacon (Amber)	Below Lower Deck	950-JE-07101	DO JB to FGS	Transition Piece	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				T-SEC-02

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

2X2,5 - 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 :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
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 1,1 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 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/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 :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 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)	
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			

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

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

ITEM	Tag	C-950-XL-07102/950-JE-07101 : BEACON / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	70-18 : F&G Devices FZ-07 (Transition Piece Area)				Module	TP
TASK	code	C10000350		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-OS-LSZH-SWB-LSZH	Cores/Size mm²	2X2,5 mm2	Color	ORANGE
From	950-XL-07102		To	950-JE-07101	

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.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
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	O,2	Ω
	SCREEN	0,2	Ω
	EARTH	NA	Ω
	ARMr	0,2	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

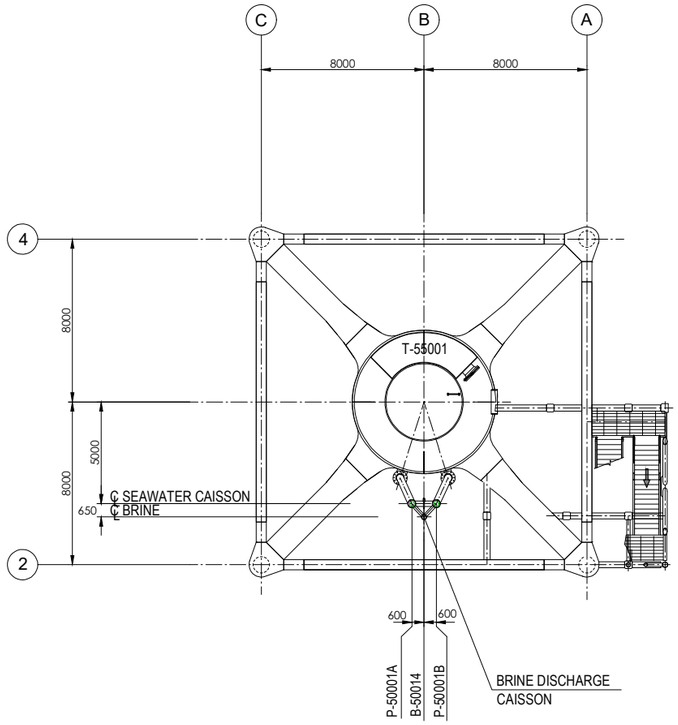
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments

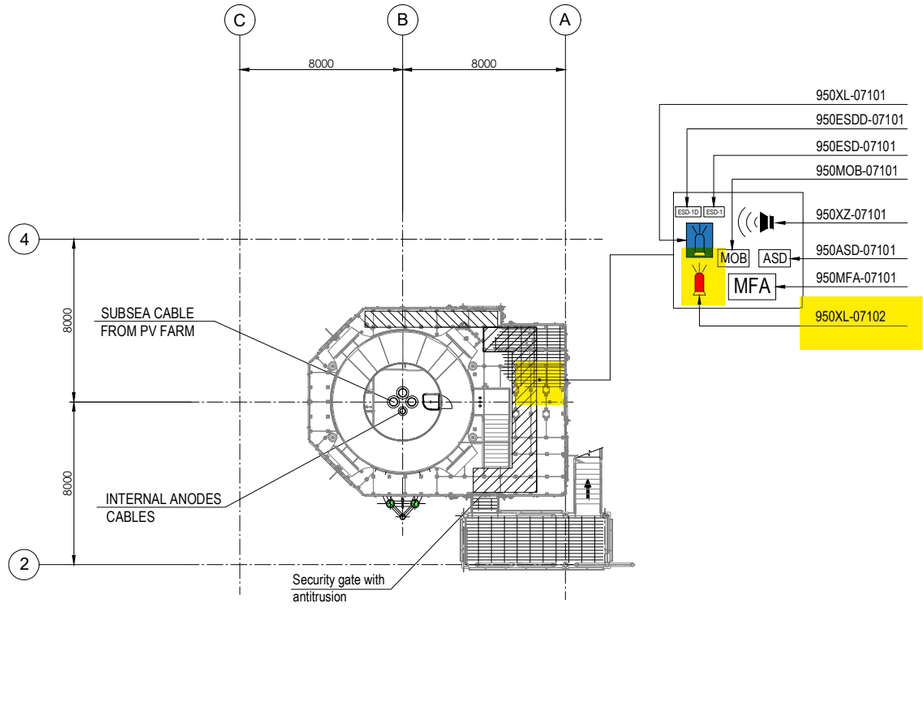
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T05:56:12.247Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:09:06.751Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

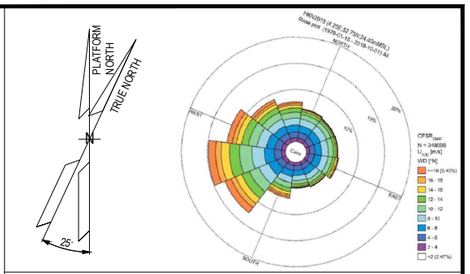


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

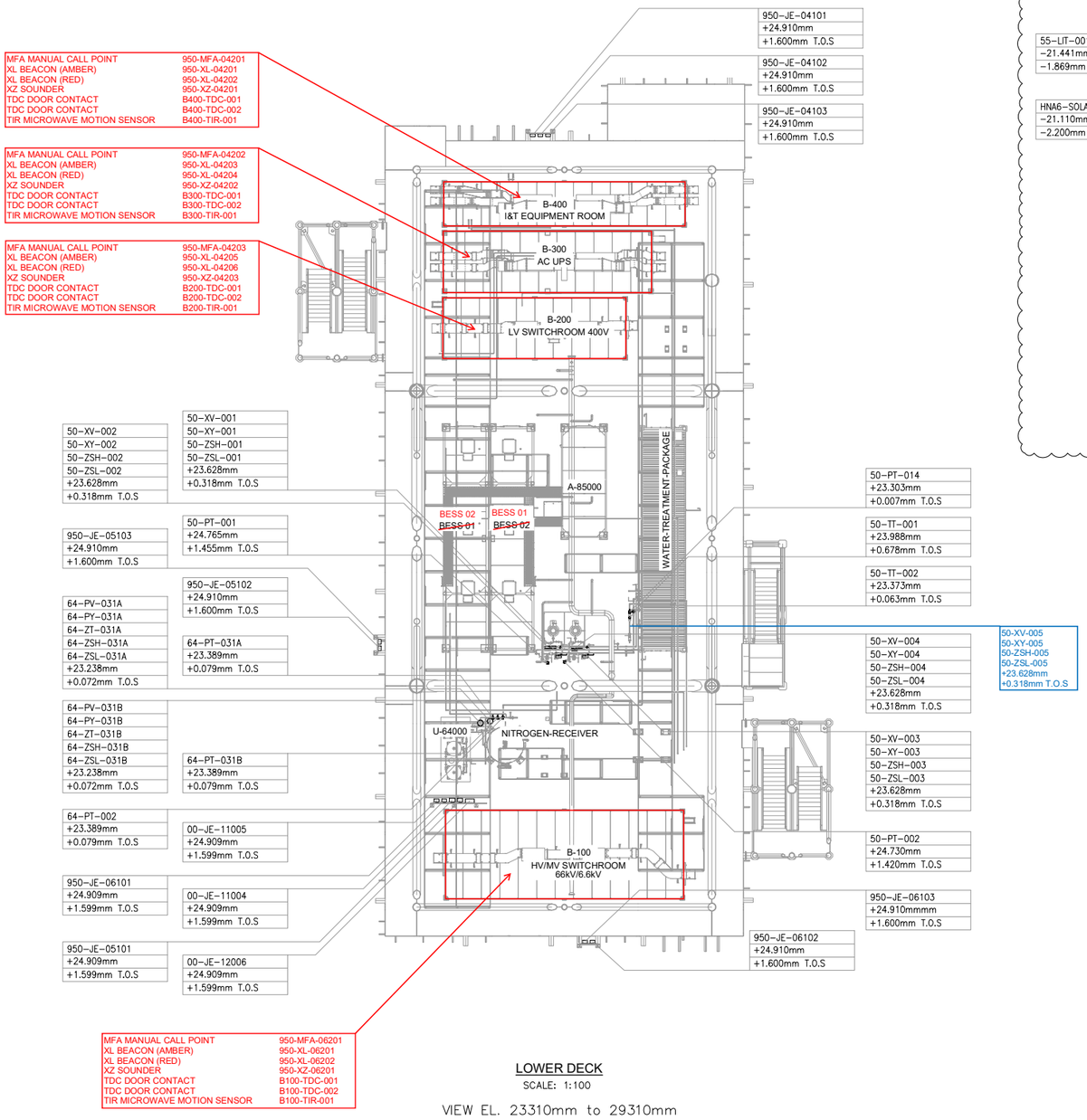
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

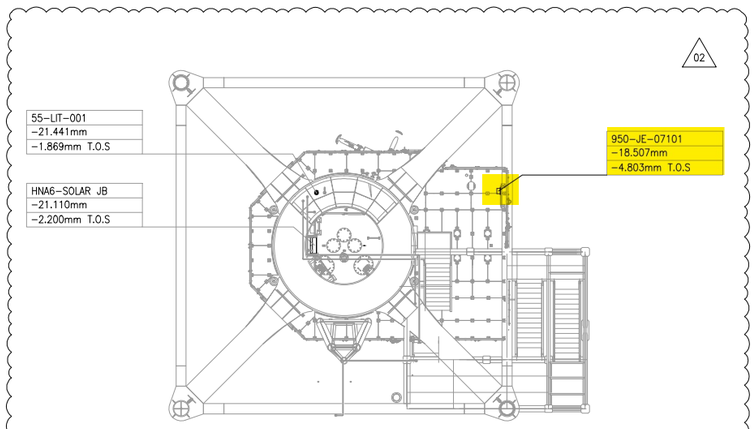
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DRAWING NO. 123A90-DDL-IN-DL-40080

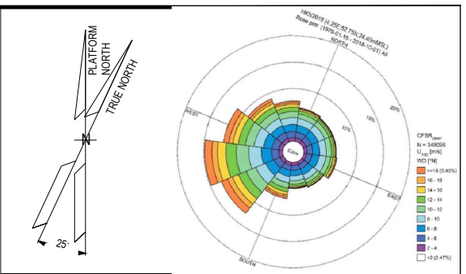
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
2_C	06/11/24	G.Randi

ROSETTI MARINO SpA

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

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

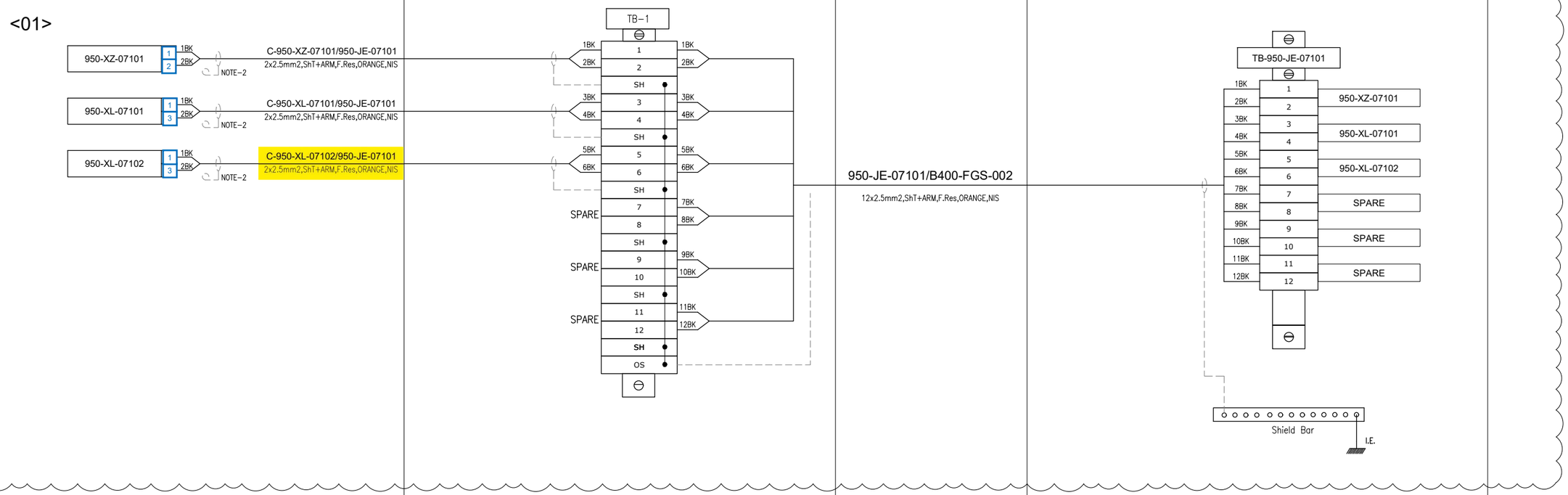
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DRAWING NO. 123-A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>



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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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

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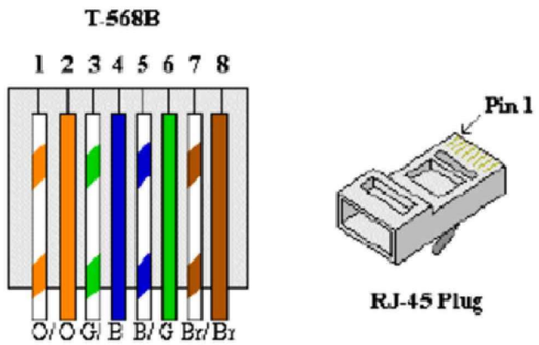
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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

REV. 01

NOTES:

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



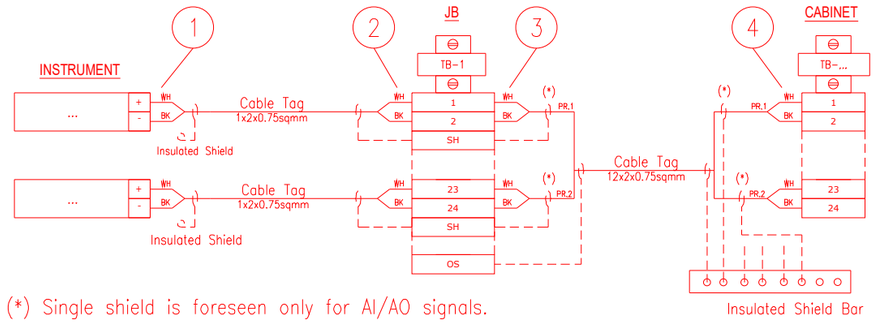
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

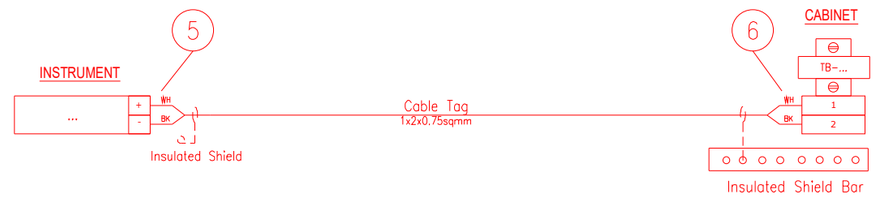
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

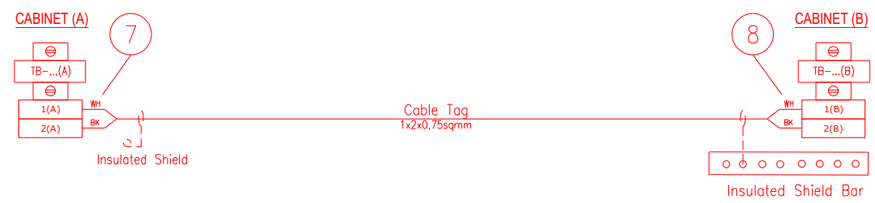
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_S	13/03/25	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

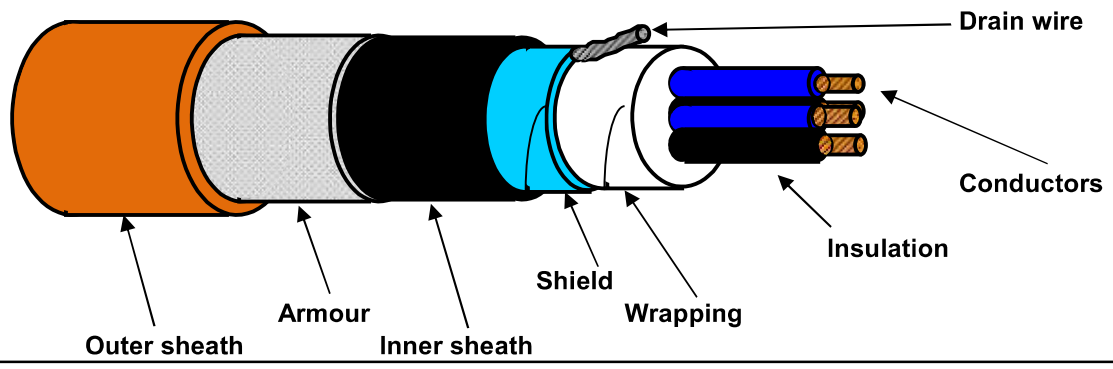
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	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
C-950-XL-07102/950-JE-07101	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-XL-07102	Flash Beacon (Red)	Below Lower Deck	950-JE-07101	DO JB to FGS	Transition Piece	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				T-SEC-02

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

2X2,5 - 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 :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
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 1,1 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 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/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 :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 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)	
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			

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

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ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-950-MFA-07101/B400-FGS-003	: MANUAL FIRE ALARM / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	70-18	: F&G Devices FZ-07 (Transition Piece Area)	Module	TP/LD_B-400		
TASK	code	C10000397	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-OS-LSZH-SWB-LSZH	Cores/Size mm²	1X2X0,75 mm2	Color	ORANGE
From	950-MFA-07101	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.	Note
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	OK
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
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	Note
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	2,2	Ω
	SCREEN	2,2	Ω
	EARTH	NA	Ω
	ARMr	2,2	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

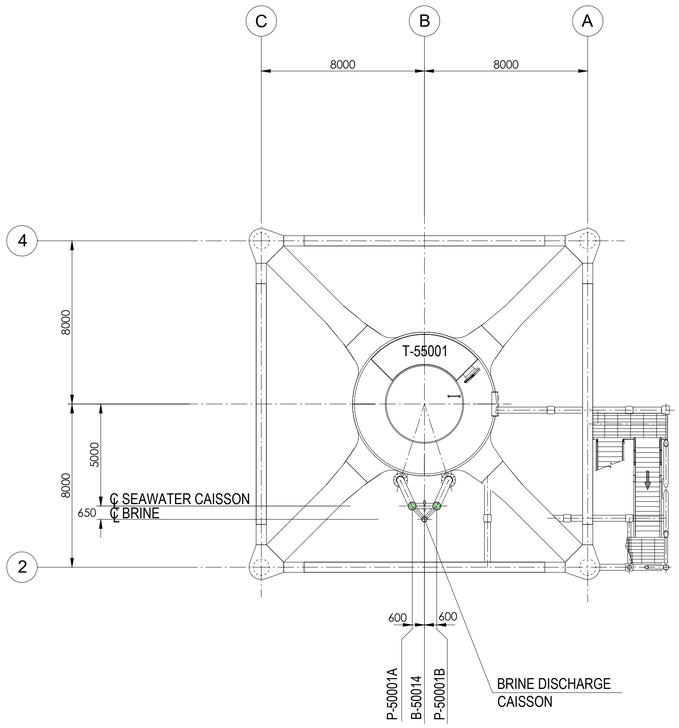
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Note 3,11: Cable dressing and termination will be completed on OFFSHORE phase. Refer to task C10004676

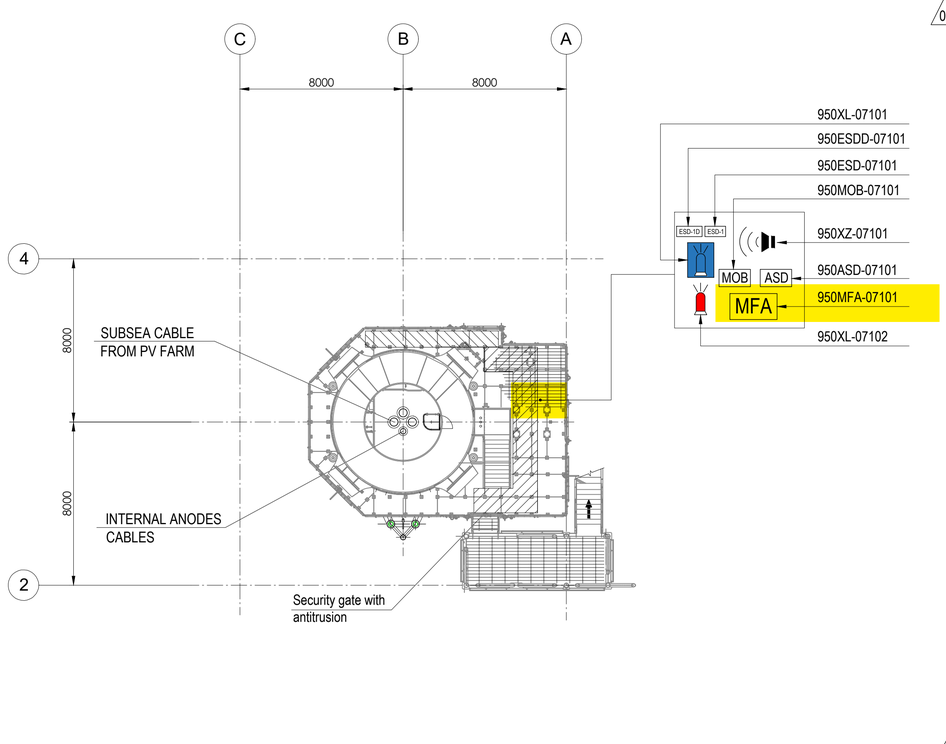
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-15	2025-02-19	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-15T10:31:30.320Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-19T16:24:43.388Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

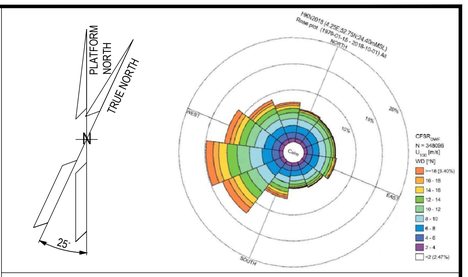


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.

01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

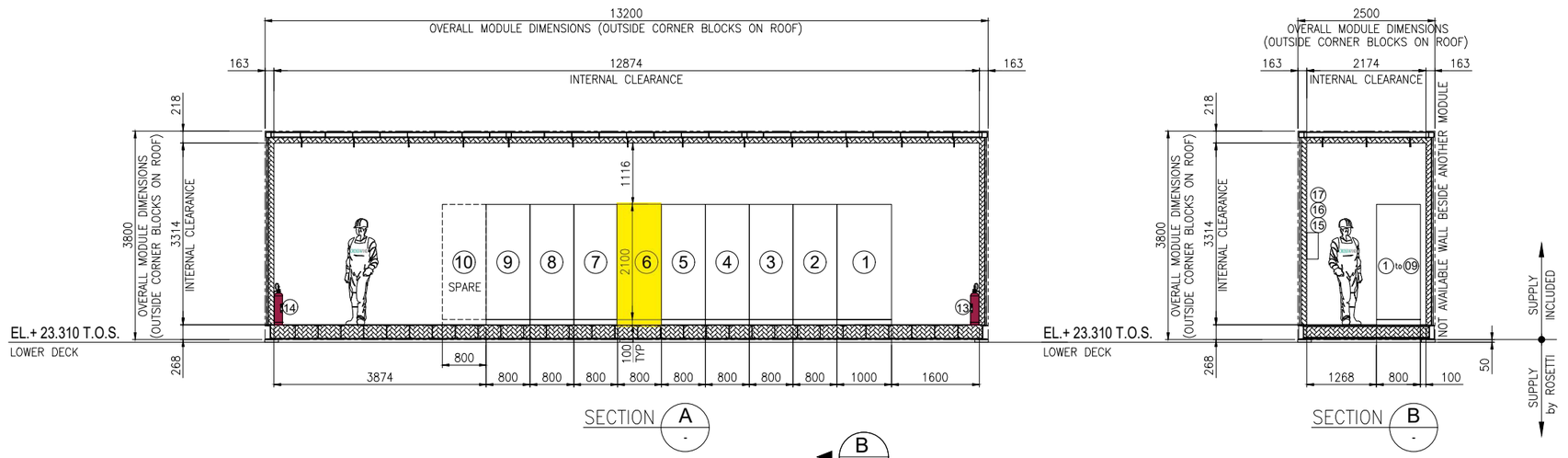
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

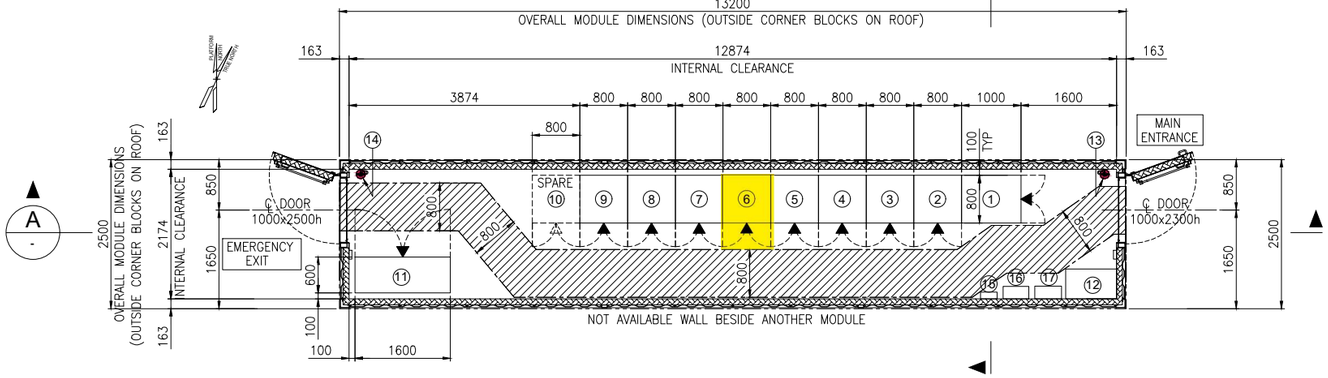
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REV. 03



SECTION A -

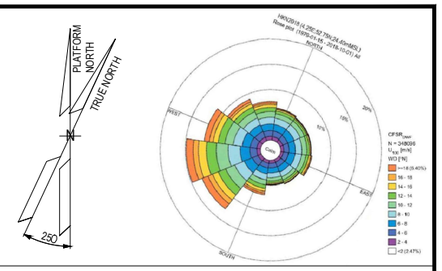
SECTION B -



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

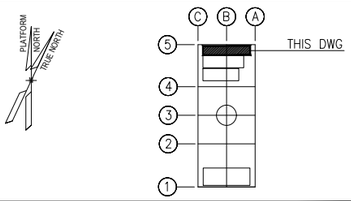
HOLDS

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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		I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	CABLE NO	MARSHALLING CABINET ~~B400-FGS-002~~ B400-FGS-003

<01>



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

REV.:	DATE:	SIGNATURE:
1_R	12/02/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
MANUAL FIRE ALARM(MFA)–DIRECT CABLES

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

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	051	01

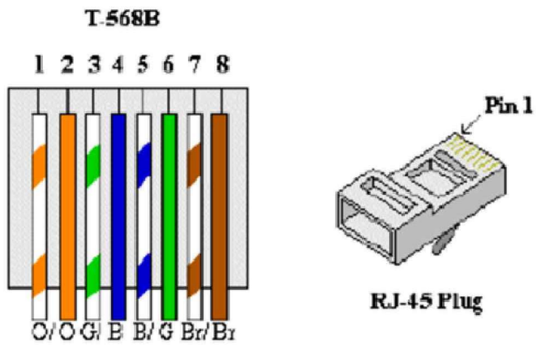
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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

REV. 01

NOTES:

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



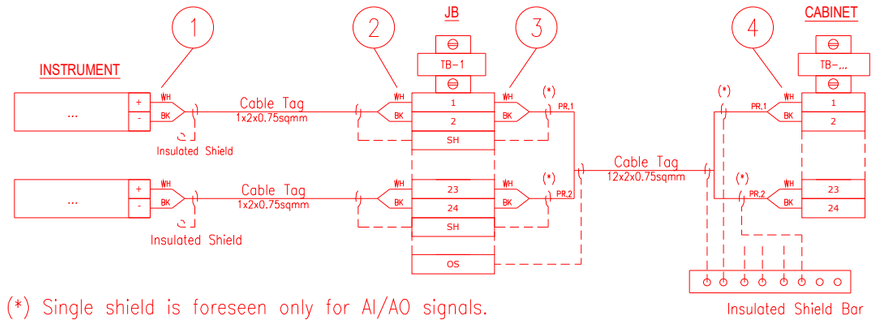
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

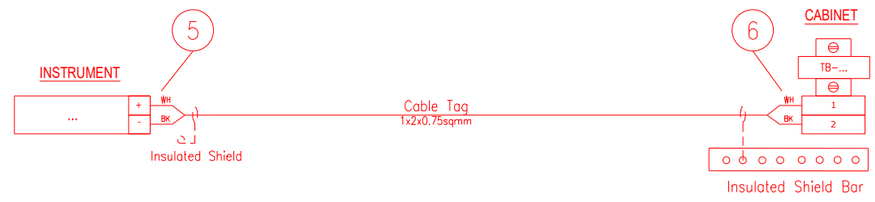
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

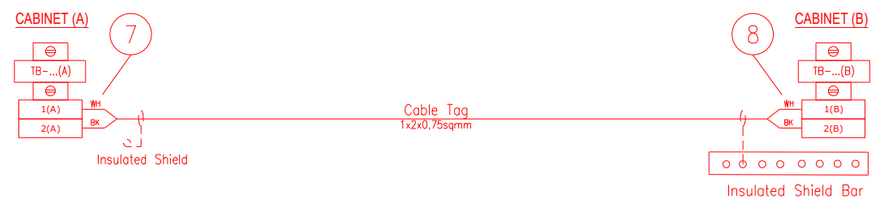
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_R	12/02/25	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

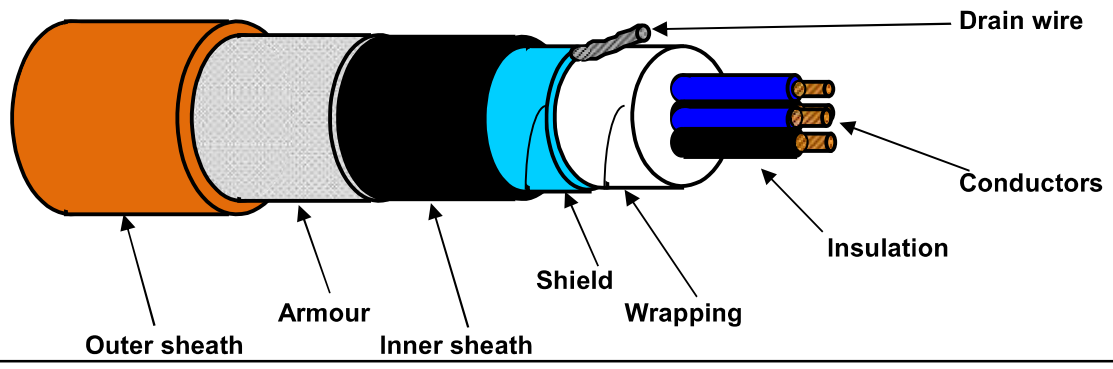
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-950-MFA-07101/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-MFA-07101	Manual Fire Alarm	Below Lower Deck		B400-FGS-003	Marshalling FGS	Lower Deck (B-400)		SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			n.a.				T-SEC-02 / T-SEC-01 / L-SEC-22 / L-SEC-18D / L-SEC-18C / L-SEC-18B / L-SEC-18A / B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F / I-MCT-403

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

1X2X0,75 - 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 0,5 mm	
Cores colour code :	**White - Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	10/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 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 1,2 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 1X2X0,75 SQMM - MGT/XLPE/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 :	(8,5 ± 10%) mm	
Over armour diameter :	(9,3 ± 10%) mm	
Outer diameter :	(11,7 ± 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 :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
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			

The data provided herein are meant for the transaction will be used in the sense of the article 19 of the Regulation (UE) 2016/679, also by such subjects in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.
All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	950-MFA-07101	: FZ-07 MFA Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	70-18	: F&G Devices FZ-07 (Transition Piece Area)			Module	TP
TASK	code	C10001072		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

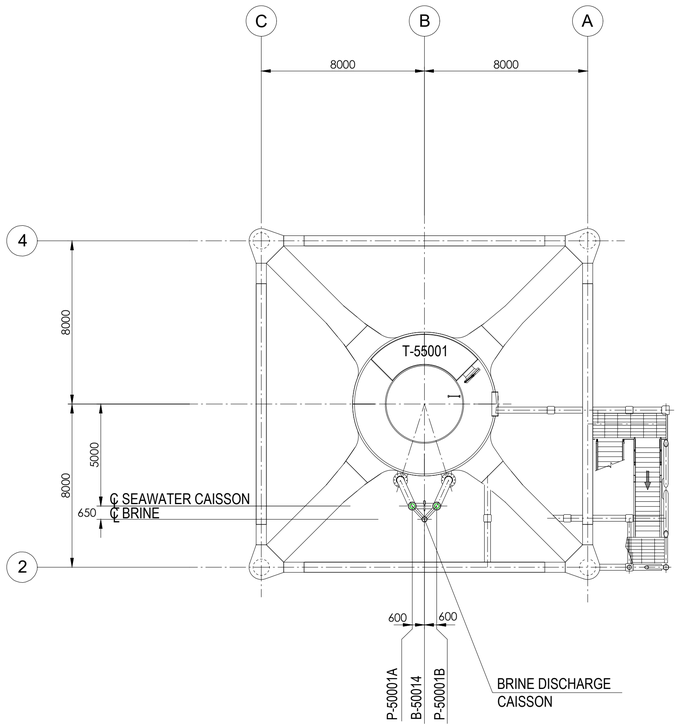
1	Check for mechanical damage.	PL
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (if required).	OK
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	PL
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

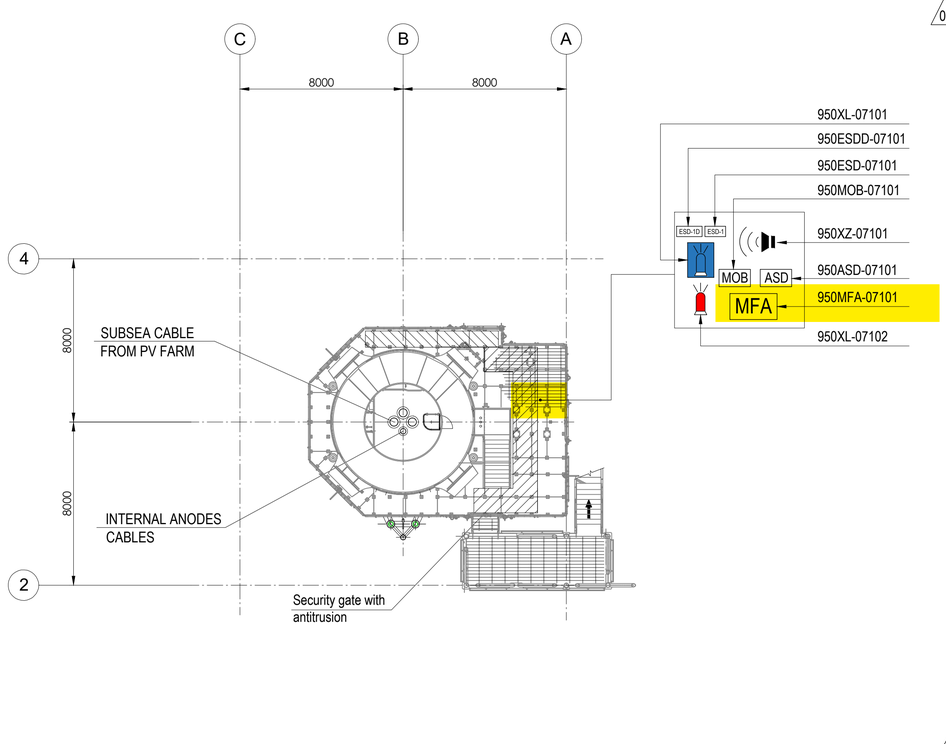
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-29	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:04:21.985Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-29T06:41:07.767Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

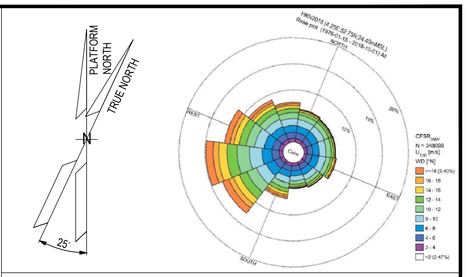


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.

01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

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

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	CABLE NO	MARSHALLING CABINET ~~B400-FGS-002~~ B400-FGS-003

<01>



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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
MANUAL FIRE ALARM(MFA)–DIRECT CABLES

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

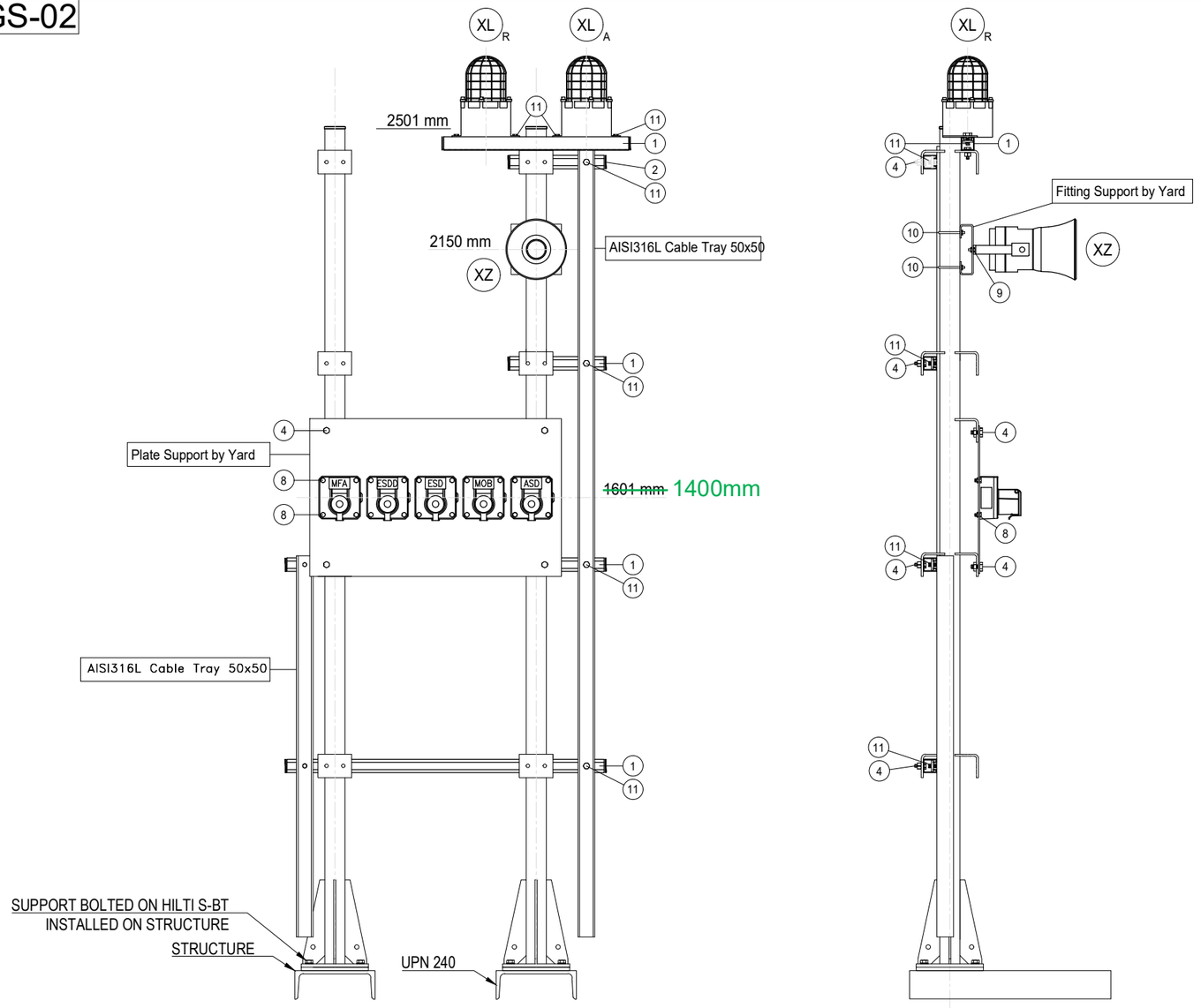
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 051	REV. 01

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

FGS-02

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

REV. 00



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	6m
2	LDPE PLUG FOR U-CHANNEL 41x41	8
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	18
8	AISI 316L BOLT M8x35 + NUT M8 + WASHER M8	20
~~9~~	~~AISI 316L BOLT M6x35 + NUT M6 + WASHER M6~~	2
10	AISI 316L 2" U BOLT M8+ N.2 NUT M8 + N.2 WASHER M8 1	2
11	AISI 316L SPRING NUT M6 FOR U-CHANNEL 41X41 + BOLT M6 + WASHER M6	10

POLE	ITEM	DESCRIPTION	TAGNAME
1	XL_A	BEACON - AMBER	950-XL-04101
	XL_R	BEACON - RED	950-XL-04102
	XZ	SOUNDER	950-XZ-04101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-04101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-04101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-04101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-04101
	~~MFA~~	~~MANUAL CALL POINT CONNECTED TO FGS~~	~~950-MFA-04101~~
1 2	XL_A	BEACON - AMBER	950-XL-07101
	XL_R	BEACON - RED	950-XL-07102
	XZ	SOUNDER	950-XZ-07101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-07101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-07101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-07101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-07101
	MFA	MANUAL CALL POINT CONNECTED TO FGS	950-MFA-07101

NOTES

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

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
FIRE & GAS DEVISES ON POLE

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

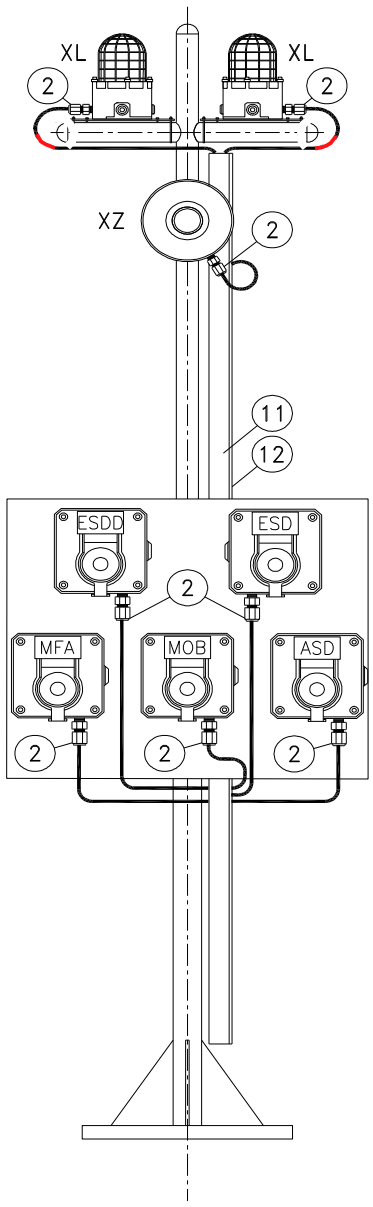
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 021	REV. 01

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

REV.:	DATE:	SIGNATURE:
1_J	31/01/25	G.Randi

ROSETTI MARINO SpA

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-07101 (AMBER)
	950-XL-07102 (RED)
	950-XZ-07101
	950-ESDD-07101
	950-ESD-07101
	950-MFA-07101
	950-MOB-07101
	950-ASD-07101

NOTE: Mechanical support is only indicative in this drawing, for real mehanical support refer to Instrument Installation Details, doc. n. 123A90-DDL-IN-DD-40017 - Instrument Installation Details

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
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	7

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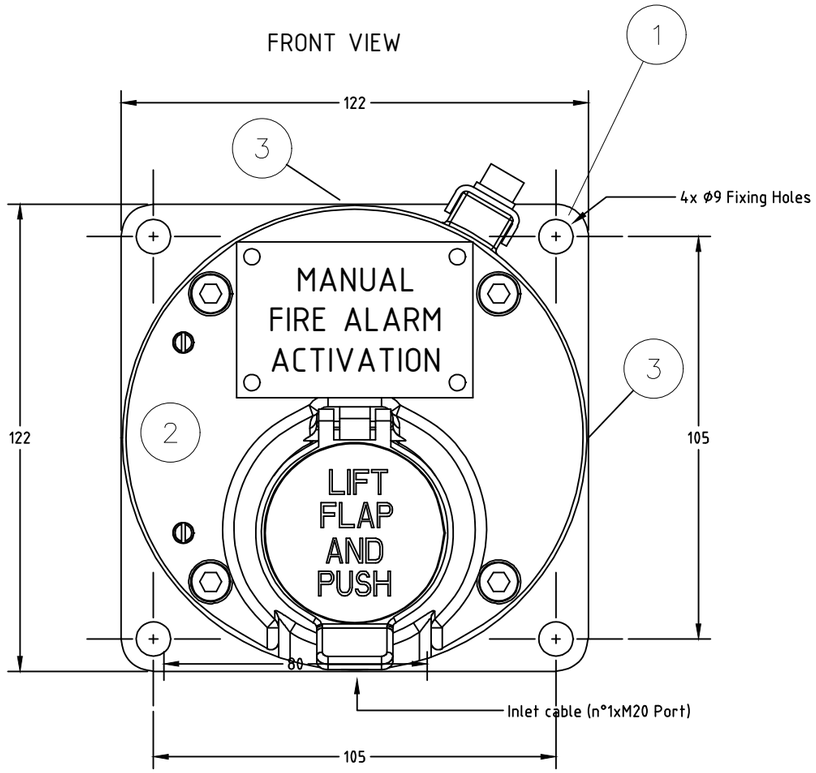
MANUAL CALL POINT (MANUAL FIRE ALARM) (RED)

ITEM	DESCRIPTIONS	NR
1	Manual Call Point (Manual Fire Alarm) (Red), MEDC SM87PBLSD1B1ROYHDRZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

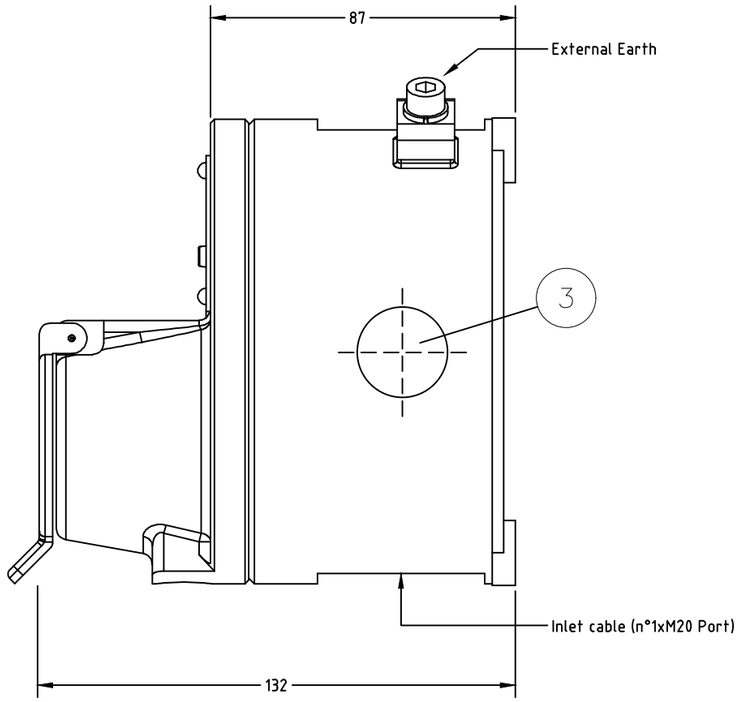
INSTALLATION QUANTITY

21

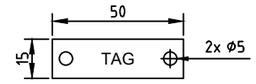
FRONT VIEW



SIDE VIEW



2 STAINLESS STEEL NAME PLATE DETAILS

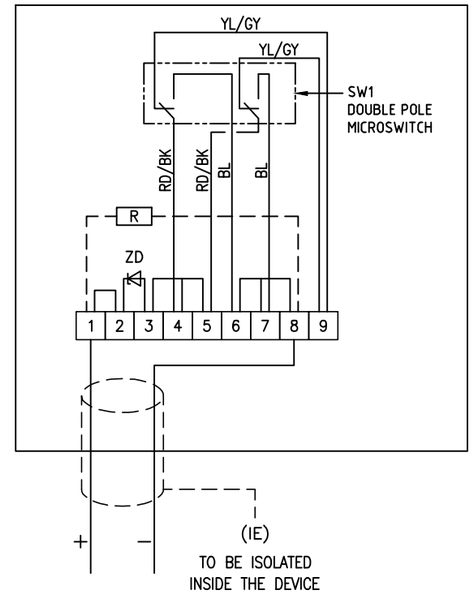


NOTE 5

WIRING

TERMINAL STRIP

ZD= ZENER 1N5339B 5.6V
R= 36 KOhm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
MANUAL CALL POINT (MANUAL FIRE ALARM) (RED)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 015

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

MANUAL CALL POINT (MANUAL FIRE ALARM) (RED) – TAG

POS.	TAG NUMBER
1	950-MFA-01101
2	950-MFA-01102
3	950-MFA-01103
4	950-MFA-02101
5	950-MFA-03101
6	950-MFA-03102
7	950-MFA-03103
8	950-MFA-03104
9	950-MFA-04101
10	950-MFA-04102
11	950-MFA-04201
12	950-MFA-04202
13	950-MFA-04203
14	950-MFA-05101
15	950-MFA-05102
16	950-MFA-05103
17	950-MFA-05104
18	950-MFA-06101
19	950-MFA-06102
20	950-MFA-06201
21	950-MFA-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
MANUAL CALL POINT (MANUAL FIRE ALARM) (RED) – TAG

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 016 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

MANUAL FIRE ALARM

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-MFA-01101	FZ-01 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
2	950-MFA-01102	FZ-01 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
3	950-MFA-01103	FZ-01 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
4	950-MFA-02101	FZ-02 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
5	950-MFA-03101	FZ-03 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
6	950-MFA-03102	FZ-03 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
7	950-MFA-03103	FZ-03 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
8	950-MFA-03104	FZ-03 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
9	950-MFA-04101	FZ-04 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
10	950-MFA-04102	FZ-04 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
11	950-MFA-04201	FZ-04 MFA ACTIVATION - B-400 INDOOR	MANUAL FIRE ALARM ACTIVATION
12	950-MFA-04202	FZ-04 MFA ACTIVATION - B-300 INDOOR	MANUAL FIRE ALARM ACTIVATION
13	950-MFA-04203	FZ-04 MFA ACTIVATION - B-200 INDOOR	MANUAL FIRE ALARM ACTIVATION
14	950-MFA-05101	FZ-05 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
15	950-MFA-05102	FZ-05 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
16	950-MFA-05103	FZ-05 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
17	950-MFA-05104	FZ-05 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
18	950-MFA-06101	FZ-06 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
19	950-MFA-06102	FZ-06 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION
20	950-MFA-06201	FZ-06 MFA ACTIVATION - B-100 INDOOR	MANUAL FIRE ALARM ACTIVATION
21	950-MFA-07101	FZ-07 MFA ACTIVATION	MANUAL FIRE ALARM ACTIVATION

File: 1724000821-IN-DS-00004-02.xlsx
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SM87BG & SM87PB manual call point range

Ex d, Ex ia, weatherproof



Overview

These manual fire alarm, emergency shutdown break-glass and pushbutton units have been designed for the most arduous environmental conditions.

The units are both easy to install and maintain. Intrinsically safe Ex ia and flameproof Ex d versions of each model are available.

A choice of either stainless steel or alloy makes the range suitable for either the offshore or onshore industries. Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore reducing maintenance costs.

Features

- Zone 0, Zone 1 and Zone 2 use*
- ATEX certified
- UL listed for USA and Canada (SM87PBL only). Class I, Div 1, Groups C & D
- ULC certified (SM87PBL only) for Class I, Zone 1 Groups C & D
- CSA certified
- IECEx certified
- Brazilian (INMETRO) certified
- Russian Fire certified
- PESO certified (Ex d only)
- SIL 2 certified (SM87PB only)
- IP66 and IP67
- DNV type approval (IEC 60945) (SM87PB only)
- Certified temperature: –55°C to +70°C*
- Stainless steel or marine grade alloy
- Robust yet lightweight
- Easy to maintain

*Model dependent

ATEX IECEx cULus LISTED ULC INMETRO CSA DNV·GL MARITIME CCC

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All other trademarks are property of their respective owners.

Powering Business Worldwide

All specifications, dimensions, weights and tolerances are nominal (typical) and Eaton reserve the right to vary all data without prior notice.
No liability is accepted for any consequence of use.

Certifications

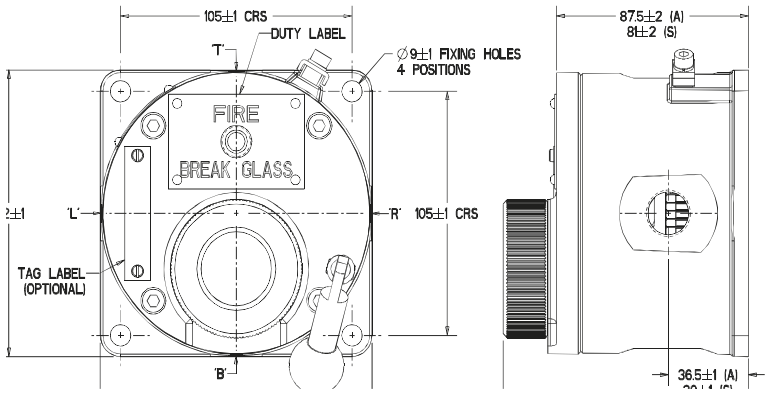
ATEX Ex d	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da
IECEx Ex d	Cert. no. IECEx BAS 09.0060 Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°/T100°C Db. IP66/IP67
IECEx Ex ia	Cert. no. IECEx BAS 10.0033X Certified to: IEC60079-0, IEC60079-11, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da
UL	Listing no. E186629 UL listed to Class 1, Div 1. Groups C & D. (SM87PBL)
ULC	Cert. no. 20091023-E320282 ULC certified for Class I, Zone 1 Groups C & D (SM87PBL)
CSA Explosion proof	Class 1, Div 1 & 2. Group D Ex d IIC T5/T6 Gb
CSA Intrinsically safe	Class 1, Div 1 & 2. Groups A-D
INMETRO Ex d	Ex db IIC T5/T6 Gb
Type Approvals	DNV (IEC 60945) (Stainless Steel SM87PB only)
SIL	SM87PB only - SIL2 Certification to IEC61508. Cert no. 20151118-4786827453
CCC	Ex d IIC T5/T6 Gb, Ex tD A21 IP66/IP67 T85°C/T100°C

Specifications

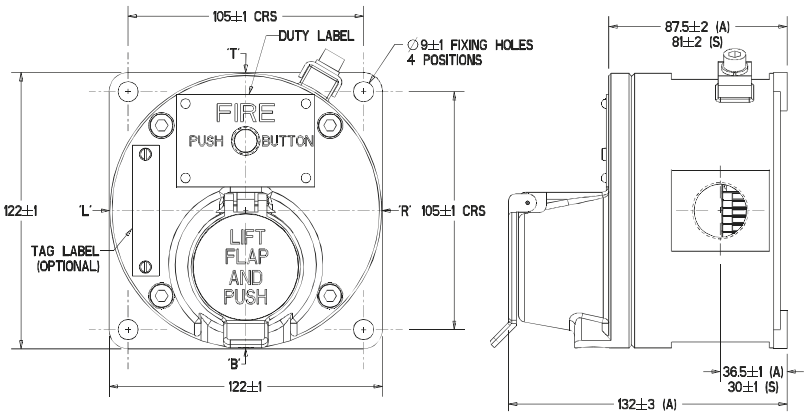
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high intensity LED can be fitted for alarm indication As standard the LED is not provided with over current protection. The forward current (If) should be limited to 20mA	
Certified temp	Ex d* Ex ia* UL CSA Explosion proof - Class 1, Div 1 & 2. CSA - Ex d IIC CSA Intrinsically safe - Class 1, Div 1 & 2 *Note: includes ATEX, IECEx & INMETRO versions	–55°C to +70°C. –55°C to +60°C –20°C to +55°C (LED version only) –40°C to +70°C, –20°C to +55°C (LED version only) –50°C to +55°C –55°C to +70°C –50°C to +40°C
Weight	3·8 kg. steel (approx.) or 2.5 kg. alloy (approx)	
Ingress protection	IP66 & IP67. SM87PB IP68 (35m for 40 hours)	
Entries	Up to 4 x M20 or M25 ISO Ex d/Ex ia Up to 4 x ½" or ¾" NPT UL Stainless steel version comes with two entries as standard. Units ordered with a single entry ordering code are supplied with 2x entries inc. plug on the opposite side	
Terminals	Will accept up to 1·5mm² cable	
Resistor values	470R minimum (d.c. & I.S. units only)	

General arrangement drawing (all dimensions in mm)

Break glass



Push button



Both the Ex ia units and the Ex d units have the same external appearance. Also the internal components are identical throughout the range. Each unit can be wired for either NO, NC or CO contacts to customer specification

Ordering requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Unit	Model	Material	Certification	Entries	Duty label	Tag label	Options	Finish
SM87	PBL	S	D	1B1R	O	Y	HD	R

Material*

	Code
Stainless steel	S
Alloy	A

*UL version only available in alloy

Model*

	Code
Breakglass latching	BGL
Lift flap breakglass latching	LBGL
Push button latching key reset	PBL
Push button only momentary action	PBM

*UL and ULC versions only available in PBL model

Certification

	Code
Ex ia	I
Ex d	D
IECEx - Ex ia	IJ
IECEx - Ex d	DJ
UL	UL
ULC	UC
CSA - Intrinsically Safe	IC
CSA - Ex proof	DC
INMETRO - Ex d	DM
CCC	DQ

Entries

	Code
M20	1
M25	2
½" NPT	3
¾" NPT	4
Other	5
Position	
Top	*T
Bottom	*B
RHS	*R
LHS	*L

*Prefix position with size code i.e. 1T1B = M20 Top and Bottom

Duty label

	Code
Fire breakglass	1
Push button	2
Fire push button	3
ESDO abandon	4
Burning house logo	5
Fire/FEU	6†
Other	O*
None	N

*Please specify
†This option must be used when ordering a red callpoint for ULC Fire Alarm applications

Tag label

	Code
Required	Y*
Not required	N

*Please specify

Options

	Code
Not required	N
LED	A
Resistor series	G*
Resistor EOL	H*
Diode	D*
3 pole c/o switch	T
4 pole c/o switch	F

*Please specify

Finish

	Code
Red	R
Blue	B
Yellow	Y
Yellow/black stripes	X
Special	S*

*Please specify

ITEM	Tag	950-XL-07101	: FZ-07 Gas Beacon Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	70-18	: F&G Devices FZ-07 (Transition Piece Area)			Module	TP
TASK	code	C10001126		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

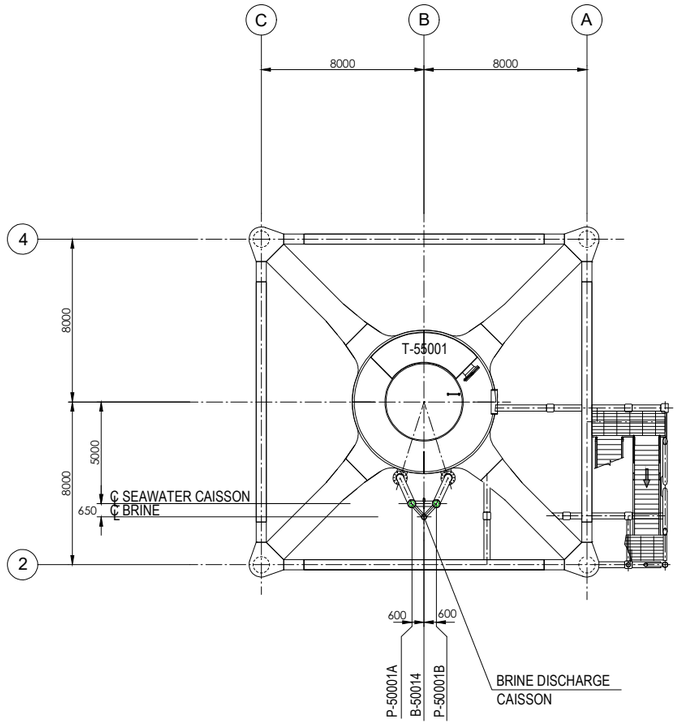
1	Check for mechanical damage.	PL
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

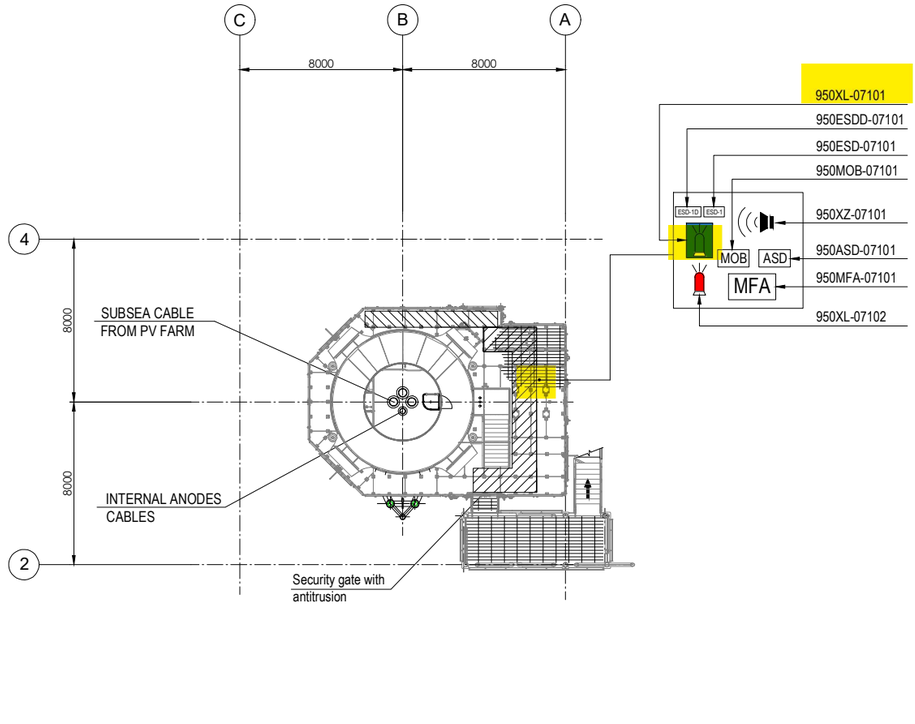
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:06:05.174Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:16:16.668Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

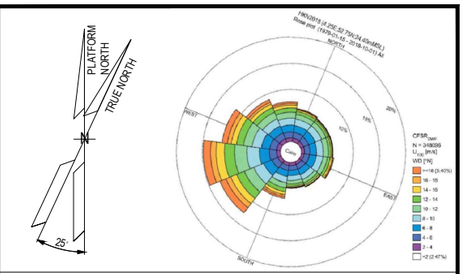


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>

950-XZ-07101 (1 1BK, 2 2BK) — NOTE-2 — C-950-XZ-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07101 (1 1BK, 3 2BK) — NOTE-2 — C-950-XL-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07102 (1 1BK, 3 2BK) — NOTE-2 — C-950-XL-07102/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
3BK	3	3BK
4BK	4	4BK
	SH	
5BK	5	5BK
6BK	6	6BK
	SH	
SPARE	7	7BK
	8	8BK
	SH	
SPARE	9	9BK
	10	10BK
	SH	
SPARE	11	11BK
	12	12BK
	SH	
	OS	

950-JE-07101/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-07101

1BK	1	950-XZ-07101
2BK	2	
3BK	3	950-XL-07101
4BK	4	
5BK	5	950-XL-07102
6BK	6	
7BK	7	SPARE
8BK	8	
9BK	9	SPARE
10BK	10	
11BK	11	SPARE
12BK	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION

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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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

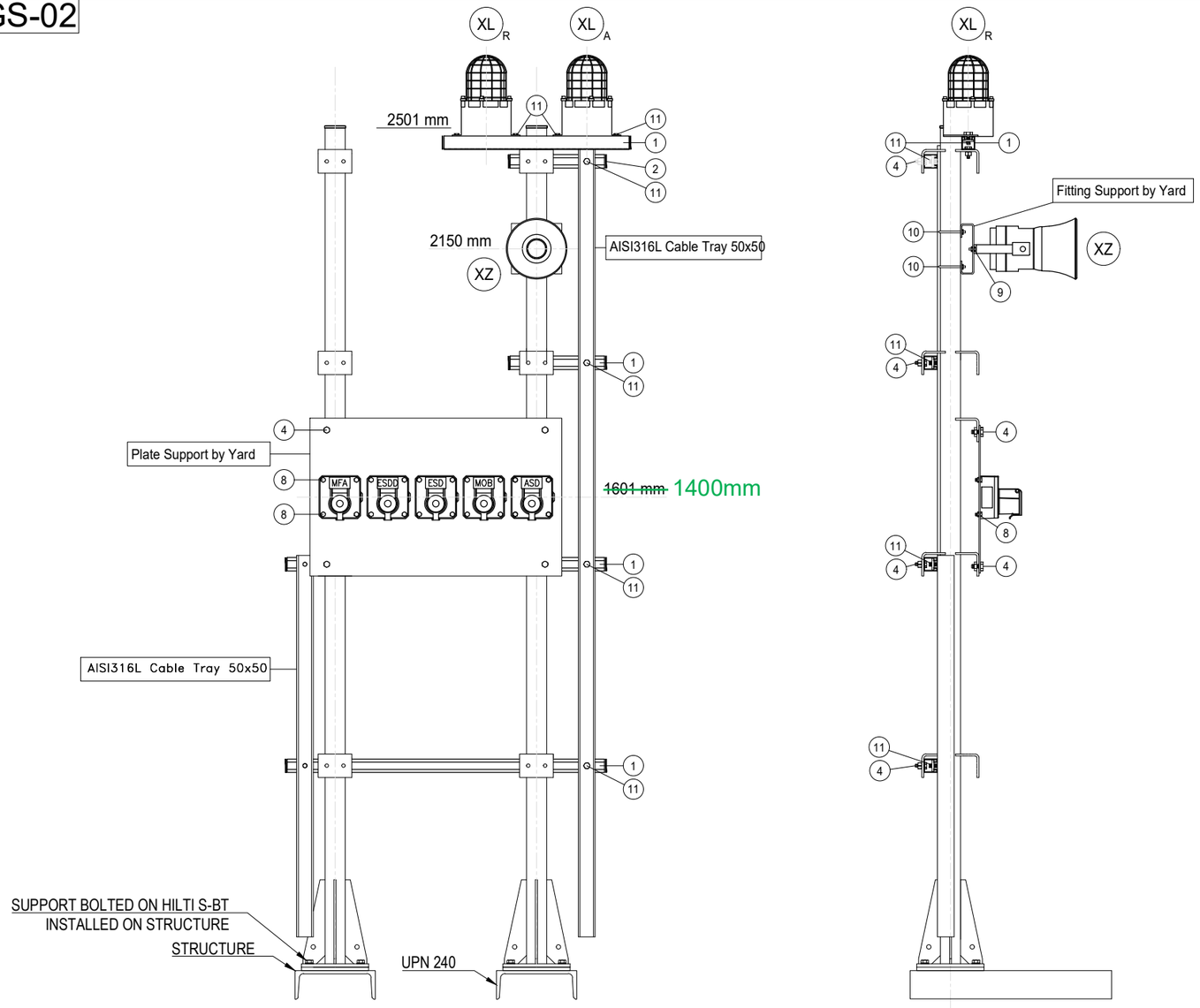
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 074	REV. 01

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

FGS-02

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

REV. 00



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	6m
2	LDPE PLUG FOR U-CHANNEL 41x41	8
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	18
8	AISI 316L BOLT M8x35 + NUT M8 + WASHER M8	20
~~9~~	~~AISI 316L BOLT M6x35 + NUT M6 + WASHER M6~~	2
10	AISI 316L 2" U BOLT M8+ N.2 NUT M8 + N.2 WASHER M8	2
11	AISI 316L SPRING NUT M6 FOR U-CHANNEL 41X41 + BOLT M6 + WASHER M6	10

POLE	ITEM	DESCRIPTION	TAGNAME
1	XL_A	BEACON - AMBER	950-XL-04101
	XL_R	BEACON - RED	950-XL-04102
	XZ	SOUNDER	950-XZ-04101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-04101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-04101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-04101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-04101
	~~MFA~~	~~MANUAL CALL POINT CONNECTED TO FGS~~	~~950-MFA-04101~~
2	XL_A	BEACON - AMBER	950-XL-07101
	XL_R	BEACON - RED	950-XL-07102
	XZ	SOUNDER	950-XZ-07101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-07101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-07101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-07101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-07101
	MFA	MANUAL CALL POINT CONNECTED TO FGS	950-MFA-07101

NOTES

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

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
FIRE & GAS DEVISES ON POLE

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

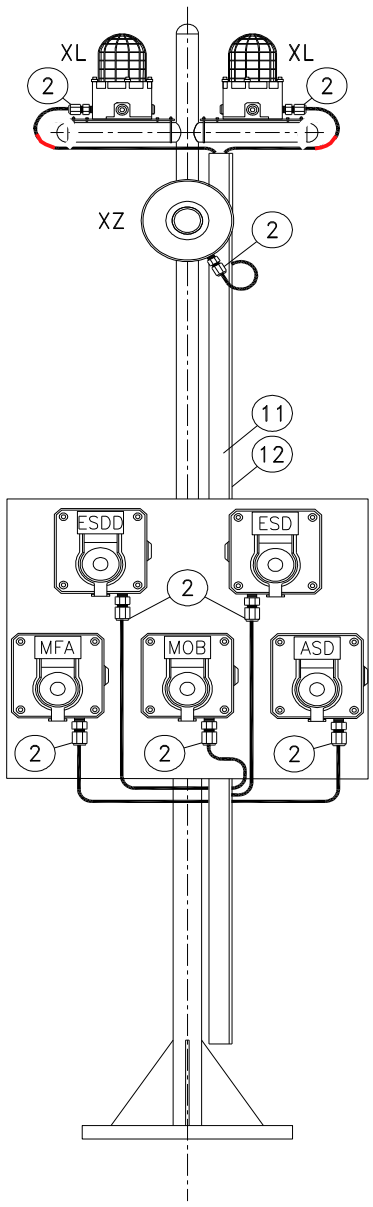
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 021	REV. 01

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

REV.:	DATE:	SIGNATURE:
1_J	31/01/25	G.Randi

ROSETTI MARINO SpA

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-07101 (AMBER)
	950-XL-07102 (RED)
	950-XZ-07101
	950-ESDD-07101
	950-ESD-07101
	950-MFA-07101
	950-MOB-07101
	950-ASD-07101

NOTE: Mechanical support is only indicative in this drawing, for real mehanical support refer to Instrument Installation Details, doc. n. 123A90-DDL-IN-DD-40017 - Instrument Installation Details

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
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	7

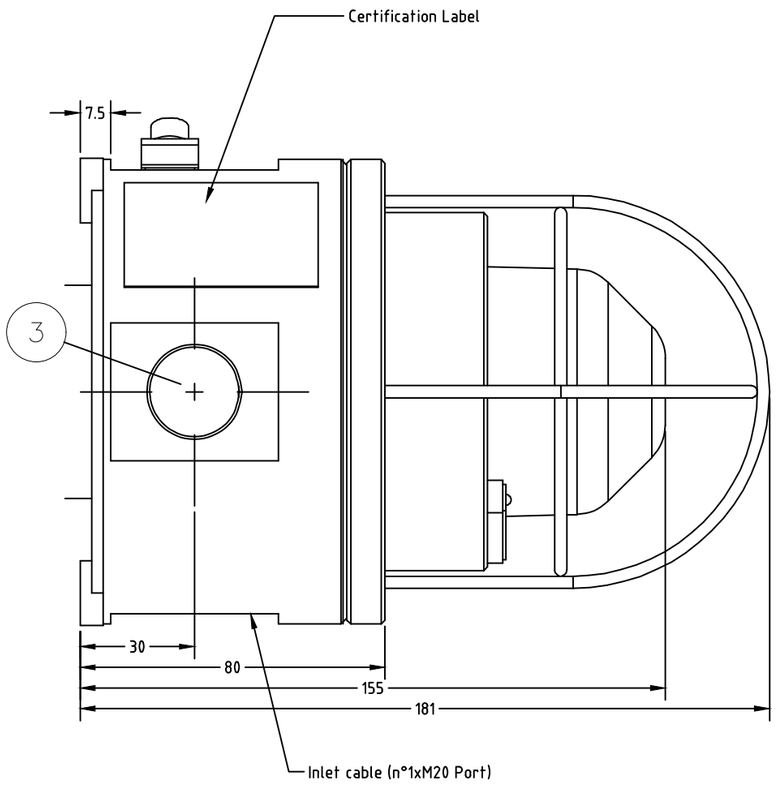
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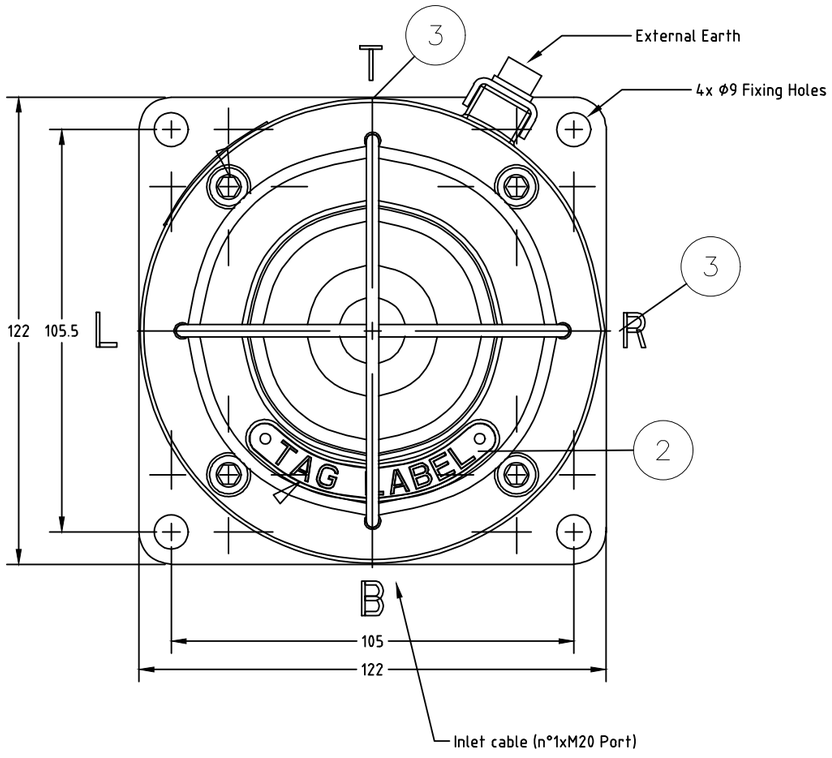
GAS FLASH BEACON (AMBER)

ITEM	DESCRIPTIONS	NR
1	Gas Flash Beacon (Amber), MEDC SM87LEDSB024AY1B1RYNRZZZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

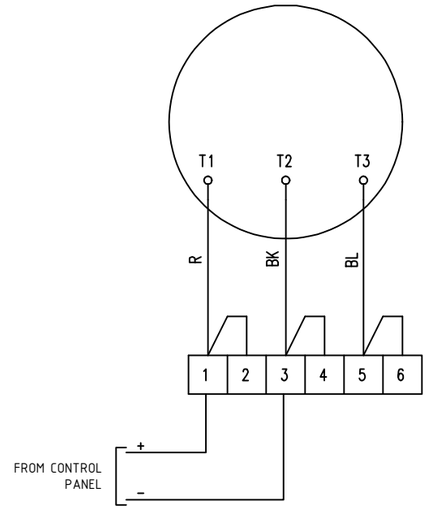
INSTALLATION
QUANTITY

13





WIRING



03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
GAS FLASH BEACON (AMBER)

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 019 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

GAS FLASH BEACON (AMBER) – TAG

POS.	TAG NUMBER
1	950-XL-01101
2	950-XL-02101
3	950-XL-03101
4	950-XL-03103
5	950-XL-04101
6	950-XL-04103
7	950-XL-04201
8	950-XL-04203
9	950-XL-04205
10	950-XL-06101
11	950-XL-06103
12	950-XL-06201
13	950-XL-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
GAS FLASH BEACON (AMBER) – TAG

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 020

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

GAS FLASH BEACON (AMBER)

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-XL-01101	FZ-01 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
2	950-XL-02101	FZ-02 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
3	950-XL-03101	FZ-03 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
4	950-XL-03103	FZ-03 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
5	950-XL-04101	FZ-04 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
6	950-XL-04103	FZ-04 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
7	950-XL-04201	FZ-04 GAS BEACON ACT. - B-400 INDOOR	FLAMMABLE GAS ALARM
8	950-XL-04203	FZ-04 GAS BEACON ACT. - B-300 INDOOR	FLAMMABLE GAS ALARM
9	950-XL-04205	FZ-04 GAS BEACON ACT. - B-200 INDOOR	FLAMMABLE GAS ALARM
10	950-XL-06101	FZ-06 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
11	950-XL-06103	FZ-06 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM
12	950-XL-06201	FZ-06 GAS BEACON ACT. - B-100 INDOOR	FLAMMABLE GAS ALARM
13	950-XL-07101	FZ-07 GAS BEACON ACTIVATION	FLAMMABLE GAS ALARM

File: 1724000821-IN-DS-00004-02.xlsx
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SM87HXB 5 joule xenon and SM87LED high intensity LED beacon range

Ex d, weatherproof



Overview

These certified beacons have been designed for use in harsh environmental conditions. The stainless steel or marine grade alloy enclosures are suitable for use offshore or onshore, where lightweight combined with corrosion resistance and strength is required. Units can be painted to customer specification and fitted with identification labels.

LED version available, offering extended lifetimes.

Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore reducing maintenance costs.

Features

- Zone 1 and Zone 2 use
- Ex d IIC T4/T5/T6
- ATEX approved, Ex II 2GD
- IECEx certified Gb, Db
- UL listed for USA and Canada
  - Class I, Div 1, Groups C & D
  - Class I, Zone 1, AExd IIB
- CSA certified
- CQST certified*
- INMETRO certified*
- SIL 2 certified
- CCOE certified
- IP66 and IP67
- Certified temperature: –55°C to +70°C*
- Stainless steel or marine grade alloy
- Xenon or LED versions
- Various lens colours
- Optional lens guard
- Telephone or relay initiated

*Depending on version

ATEX IECEx cULus INMETRO CQST NAN YANG

Eaton
Unit B, Sutton Parkway
Oddicroft Lane
Sutton in Ashfield
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NG17 5FB

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All other trademarks are property of their respective owners.

Powering Business Worldwide

All specifications, dimensions, weights and tolerances are nominal (typical) and Eaton reserve the right to vary all data without prior notice. No liability is accepted for any consequence of use.

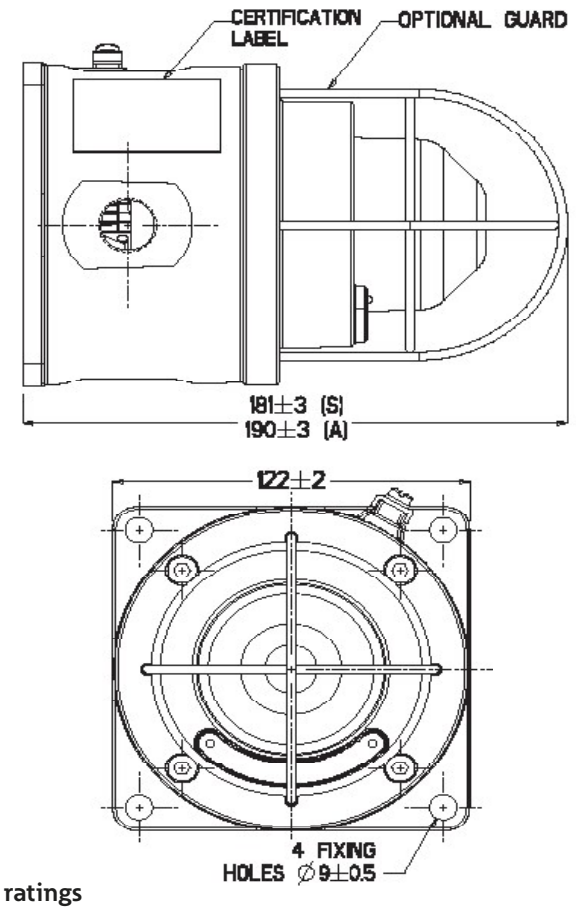
Certifications

ATEX Ex d	Cert. no. Baseefa 03ATEX0222 Certified to: EN60079-0, EN60079-1, EN60079-31 SM87HXB: Ex II 2GD, Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db SM87LED: Ex II 2GD, Ex d IIC T6 Gb, Ex tb IIIC T55°C/ T70°C Db
IECEx Ex d	Cert. no. IECEx BAS 09.0059 Certified to: IEC60079-0, IEC60079-1, IEC60079-31 SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db SM87LED: Ex d IIC T6 Gb, Ex tb IIIC T55°C/ T70°C Db
UL	Listing no. E187894 Class I, Div 1, Groups C & D Class I, Zones 1. (SM87HXB & SM87XBT only)
CSA	Cert no. 96406. (SM87HXB only) Certified to: C22.2 Nos 0, 0.4, 0.5, 9, 30-M1986, 94-M91, 137-M1981 Class I, Div 1. Group D
INMETRO Ex d	SM87HXB: Ex db IIC T5/T6 Gb, Ex tb IIIC T80°C/T95°C Db SM87LED: Ex db IIC T6 Gb, Ex tb IIIC T70°C Db
CQST Ex d	SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db
SIL	SIL2 certification to IEC61508. Cert. No. 20151119-4786827453

Specifications

Material	SM87HXBS and SM87LEDS: Grade 316 ANC4B stainless steel SM87HXBA and SM87LEDA: LM25 TF marine grade alloy Lens: glass UL version available only in marine grade alloy
Finish	Epoxy paint finish as standard
Certified temp	SM87HXB: ATEX, IECEx, CQST, INMETRO -55°C to +70°C (T5) -55°C to +55°C (T6) UL -55°C to +70°C CSA -50°C to +40°C SM87LED: ATEX, IECEx, CQST, INMETRO -55°C to +55°C* (T6) * Operating temperature is -20°C to +55°C
Weight	SM87HXBS & SM87LEDS: 3.8kg each (approx) SM87HXBA & SM87LEDA: 2kg. each (approx)
Ingress protection	IP66 & IP67
Entries	Up to 4 x M20 / M25 ISO or 1/2" / 3/4" NPT
Terminals	SM87HXB SM87LED: Terminal suitable for 2.5mm2 cable
Relay initiate	Initiation by telephone ringing tone or low voltage control signals
Labels	Duty & tag labels optional

General arrangement drawing (all dimensions in mm)



Electrical ratings

	d.c.		a.c. 50/60Hz				
Voltage	24	48	110	120	220	240	254
Tube energy (Joules) SM87HXB	5	5	6	7	6	7	8
Current consumption SM87HXB	393	175	250	275	120	135	153
Current consumption SM87LED (mA)	165	85	N/A	N/A	N/A	N/A	N/A
Effective intensity (Cd)	29	29	32	39	32	39	44
Peak intensity (Cd)	22213	22213	25061	30187	25061	30187	34174

NOTE: The above figures (Cd) are for a clear lens @ 1Hz flash rate

Multiplying factor for coloured lenses

Red	Blue	Amber	Green	Yellow
0.15	0.12	0.51	0.49	0.36

The photometric data given above has been verified by BSI. Reports are available if required

LED light output - steady or flashing (customer selectable)

	Red	Blue	Amber	Green
Total LED output (candela)	192	64	64	17

LED/lens colour: red, blue, green, amber, yellow (not LED) or clear
Flash rate: 90fpm as standard, other flash rates available on request

Ordering requirements

Flash rate: 60fpm

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Model	Certification	Voltage	Lens/LED colour	Guard	Entries	Tag/duty	Options	Finish
SM87LEDS	B	024	A	Y	1B1R	Y	N	R

Model

Voltage	Code
Xenon (stainless steel)	SM87HXBS
Xenon (alloy)	SM87HXBA
LED Exd (stainless steel)	SM87LEDS
LED Exd (alloy)	SM87LEDA

Certification

Certification	Code
ATEX	B
IECEx	J
UL	UL†
CSA	C‡
Chinese(CQST)	Q
INMETRO	DM

† Only SM87HXBA is available UL certified
‡ Only SM87HXB

Voltage

Voltage	Code
24 V d.c.	024
48 V d.c.	048
110 V a.c. not LED	110
120 V a.c. not LED	120
220 V a.c. not LED	220
240 V a.c. not LED	240
254 V a.c. not LED	254

Lens/LED colour

Colour	Code
Clear	C
Red	R
Blue	B
Green	G
Amber	A
Yellow (not LED)	Y

Guard

Guard	Code
None	N
Yes	Y

Entries

Entries	Code
M20	1
M25	2
1/2" NPT	3
3/4" NPT	4
Top	*T
Bottom	*B
RHS	*R
LHS	*L

* Prefix position with entry size code
e.g. 1T1B=M20 Top and Bottom entries

Tag/duty

Label	Code
None	N
Yes	Y*

* Please specify wording (Note: 15 characters maximum)

Options

Options	Code
Telephone	T*‡
Relay	R*‡
EOL resistor	E*†
None	N

* Not available on UL versions
† Please specify
‡ For SM87LED please specify if steady or flashing is required

Finish

Colour	Code
Red	R
Blue	B
Yellow	Y
Yellow/ black stripe	X
Grey	G
White	W
Special	S*

*Please specify

ITEM	Tag	950-XL-07102	: FZ-07 Fire Beacon Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	70-18	: F&G Devices FZ-07 (Transition Piece Area)			Module	TP
TASK	code	C10001127		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

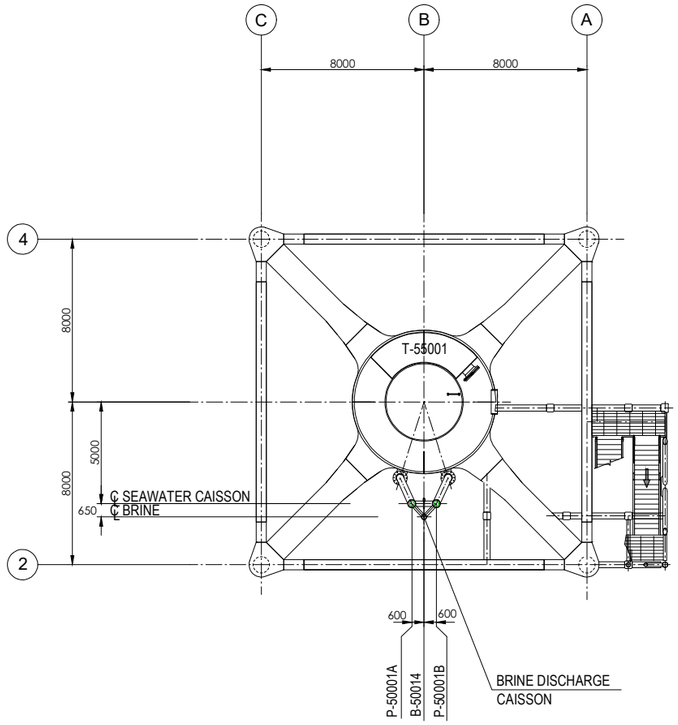
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (if required).	OK
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

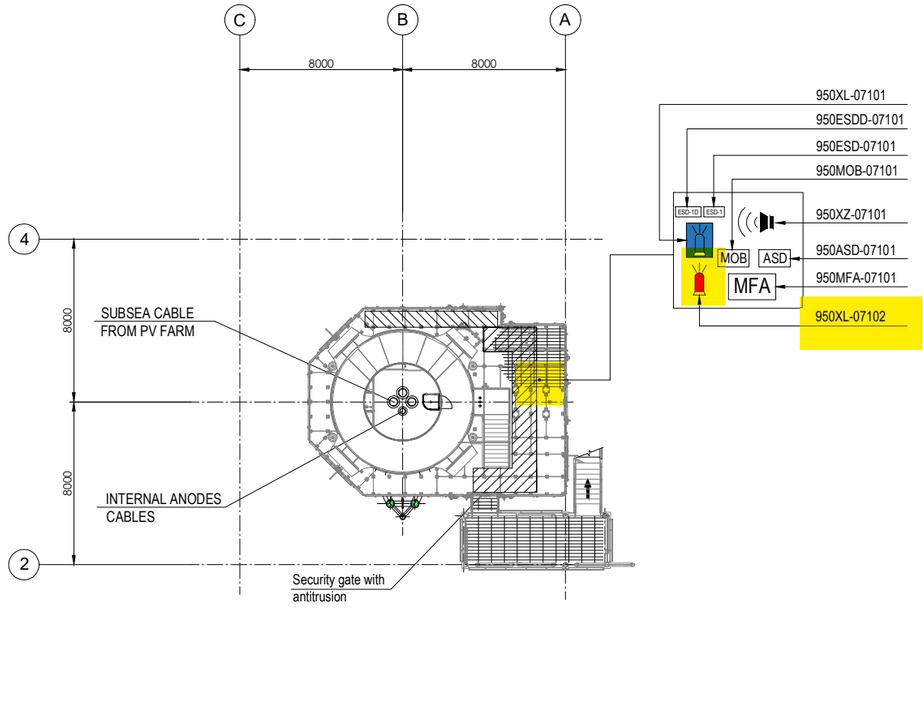
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:08:59.449Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:20:14.435Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.

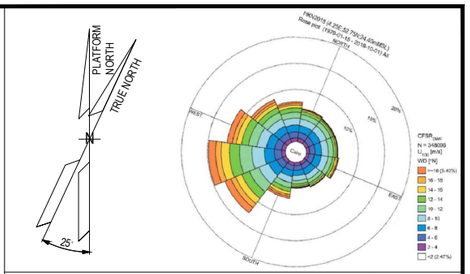


PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
	123A90-DDL-SAP-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>

950-XZ-07101 (1 1BK, 2 2BK) — NOTE-2 — C-950-XZ-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07101 (1 1BK, 3 2BK) — NOTE-2 — C-950-XL-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07102 (1 1BK, 3 2BK) — NOTE-2 — C-950-XL-07102/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
3BK	3	3BK
4BK	4	4BK
	SH	
5BK	5	5BK
6BK	6	6BK
	SH	
SPARE	7	7BK
	8	8BK
	SH	
SPARE	9	9BK
	10	10BK
	SH	
SPARE	11	11BK
	12	12BK
	SH	
	OS	

950-JE-07101/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-07101

1BK	1	950-XZ-07101
2BK	2	
3BK	3	950-XL-07101
4BK	4	
5BK	5	950-XL-07102
6BK	6	
7BK	7	SPARE
8BK	8	
9BK	9	SPARE
10BK	10	
11BK	11	SPARE
12BK	12	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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

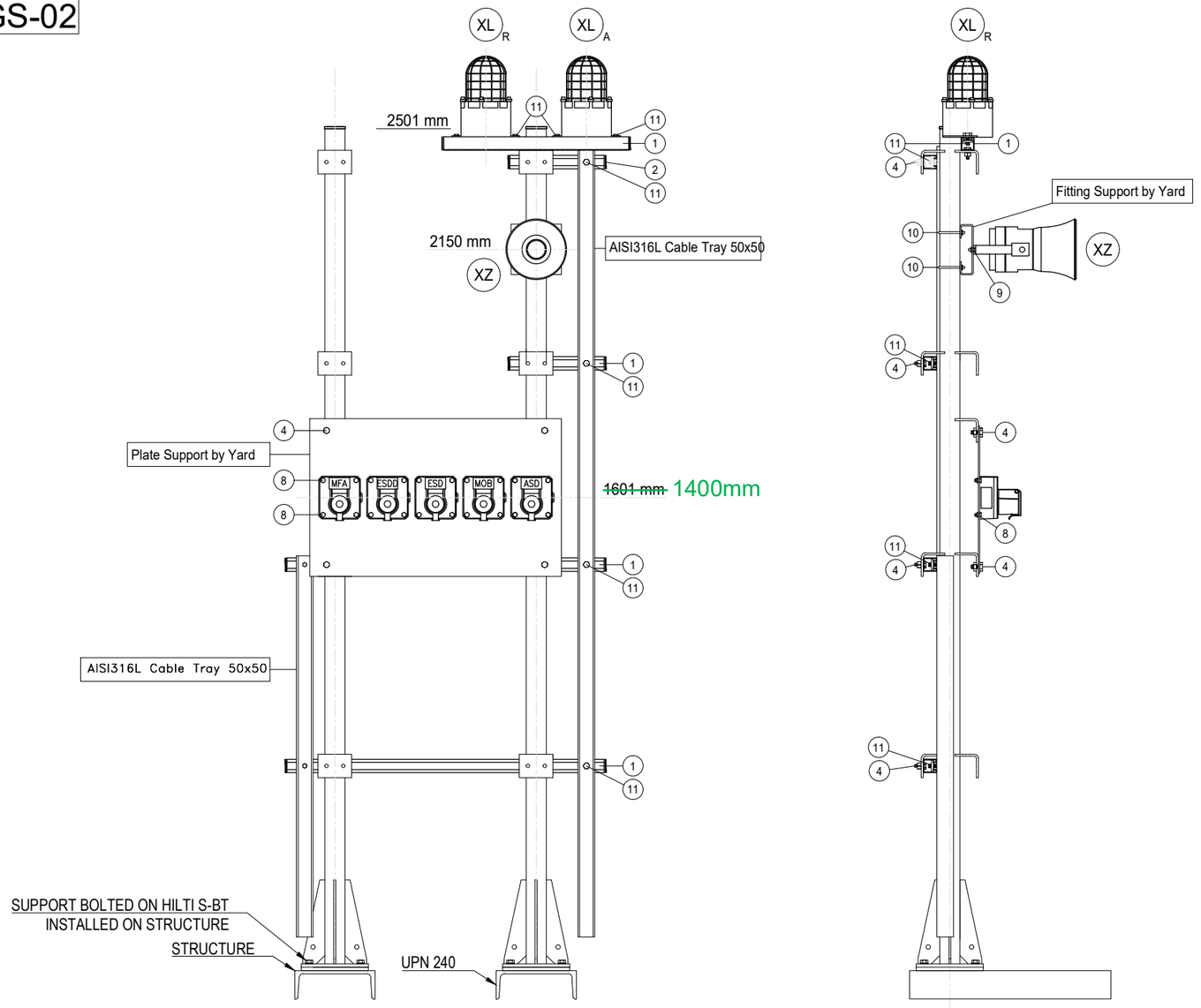
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 074	REV. 01

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

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

REV. 00

FGS-02



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	6m
2	LDPE PLUG FOR U-CHANNEL 41x41	8
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	18
8	AISI 316L BOLT M8x35 + NUT M8 + WASHER M8	20
~~9~~	~~AISI 316L BOLT M6x35 + NUT M6 + WASHER M6~~	2
10	AISI 316L 2" U BOLT M8+ N.2 NUT M8 + N.2 WASHER M8 1	2
11	AISI 316L SPRING NUT M6 FOR U-CHANNEL 41X41 + BOLT M6 + WASHER M6	10

POLE	ITEM	DESCRIPTION	TAGNAME
1	XL_A	BEACON - AMBER	950-XL-04101
	XL_R	BEACON - RED	950-XL-04102
	XZ	SOUNDER	950-XZ-04101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-04101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-04101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-04101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-04101
	~~MFA~~	~~MANUAL CALL POINT CONNECTED TO FGS~~	~~950-MFA-04101~~
1 2	XL_A	BEACON - AMBER	950-XL-07101
	XL_R	BEACON - RED	950-XL-07102
	XZ	SOUNDER	950-XZ-07101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-07101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-07101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-07101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-07101
	MFA	MANUAL CALL POINT CONNECTED TO FGS	950-MFA-07101

NOTES

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

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
FIRE & GAS DEVISES ON POLE

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

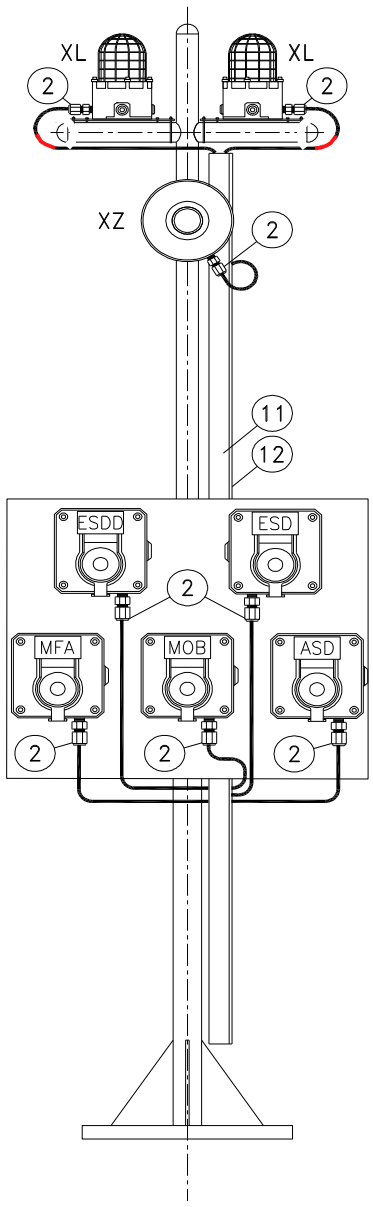
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 021	REV. 01

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

REV.:	DATE:	SIGNATURE:
1_J	31/01/25	G.Randi

ROSETTI MARINO SpA

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-07101 (AMBER)
	950-XL-07102 (RED)
	950-XZ-07101
	950-ESDD-07101
	950-ESD-07101
	950-MFA-07101
	950-MOB-07101
	950-ASD-07101

NOTE: Mechanical support is only indicative in this drawing, for real mehanical support refer to Instrument Installation Details, doc. n. 123A90-DDL-IN-DD-40017 - Instrument Installation Details

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
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	7

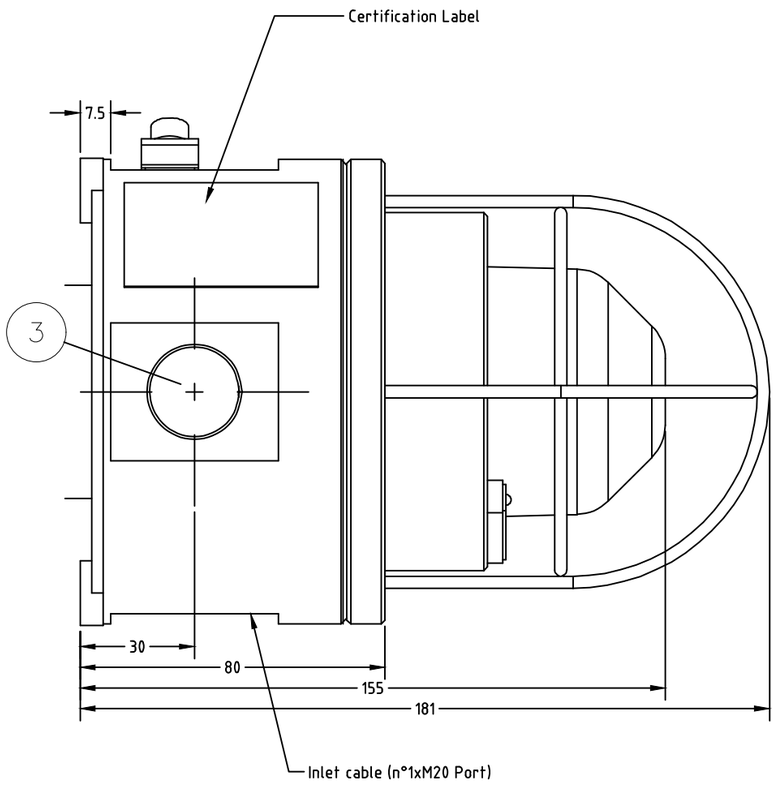
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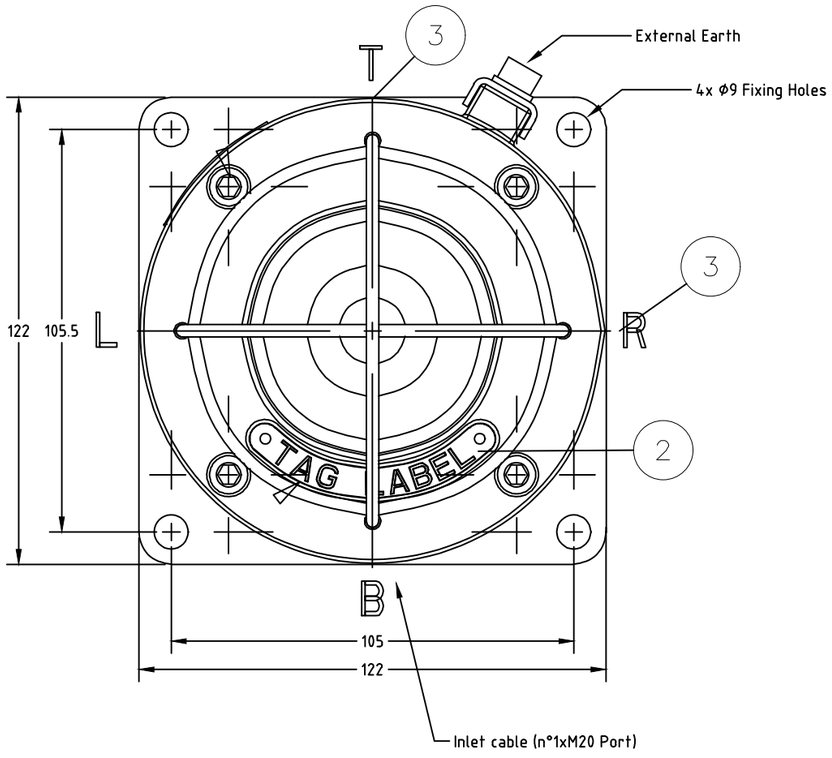
FIRE FLASH BEACON (RED)

ITEM	DESCRIPTIONS	NR
1	Fire Flash Beacon (Red), MEDC SM87LEDSB024RY1B1RYNRZZZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

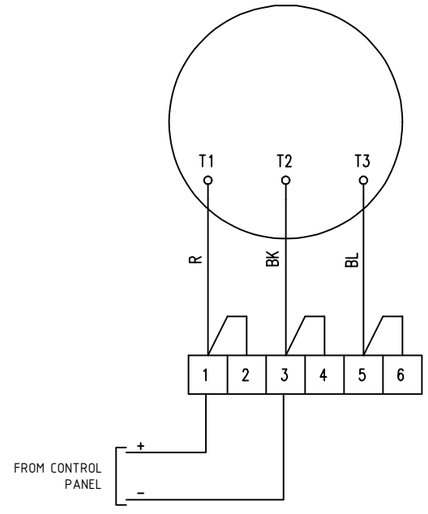
INSTALLATION
QUANTITY

13





WIRING



03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
FIRE FLASH BEACON (RED)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 021

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

FIRE FLASH BEACON (RED) – TAG

POS.	TAG NUMBER
1	950-XL-01102
2	950-XL-02102
3	950-XL-03102
4	950-XL-03104
5	950-XL-04102
6	950-XL-04104
7	950-XL-04202
8	950-XL-04204
9	950-XL-04206
10	950-XL-06102
11	950-XL-06104
12	950-XL-06202
13	950-XL-07102

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
FIRE FLASH BEACON (RED) – TAG

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 022

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

FIRE FLASH BEACON (RED)

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-XL-01102	FZ-01 FIRE BEACON ACTIVATION	FIRE ALARM
2	950-XL-02102	FZ-02 FIRE BEACON ACTIVATION	FIRE ALARM
3	950-XL-03102	FZ-03 FIRE BEACON ACTIVATION	FIRE ALARM
4	950-XL-03104	FZ-03 FIRE BEACON ACTIVATION	FIRE ALARM
5	950-XL-04102	FZ-04 FIRE BEACON ACTIVATION	FIRE ALARM
6	950-XL-04104	FZ-04 FIRE BEACON ACTIVATION	FIRE ALARM
7	950-XL-04202	FZ-04 FIRE BEACON ACT. - B-400 INDOOR	FIRE ALARM
8	950-XL-04204	FZ-04 FIRE BEACON ACT. - B-300 INDOOR	FIRE ALARM
9	950-XL-04206	FZ-04 FIRE BEACON ACT. - B-200 INDOOR	FIRE ALARM
10	950-XL-06102	FZ-06 FIRE BEACON ACTIVATION	FIRE ALARM
11	950-XL-06104	FZ-06 FIRE BEACON ACTIVATION	FIRE ALARM
12	950-XL-06202	FZ-06 FIRE BEACON ACT. - B-100 INDOOR	FIRE ALARM
13	950-XL-07102	FZ-07 FIRE BEACON ACTIVATION	FIRE ALARM

File: 1724000821-IN-DS-00004-02.xlsx
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SM87HXB 5 joule xenon and SM87LED high intensity LED beacon range

Ex d, weatherproof



Overview

These certified beacons have been designed for use in harsh environmental conditions. The stainless steel or marine grade alloy enclosures are suitable for use offshore or onshore, where lightweight combined with corrosion resistance and strength is required. Units can be painted to customer specification and fitted with identification labels.

LED version available, offering extended lifetimes.

Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore reducing maintenance costs.

Features

- Zone 1 and Zone 2 use
- Ex d IIC T4/T5/T6
- ATEX approved, Ex II 2GD
- IECEx certified Gb, Db
- UL listed for USA and Canada
  - Class I, Div 1, Groups C & D
  - Class I, Zone 1, AExd IIB
- CSA certified
- CQST certified*
- INMETRO certified*
- SIL 2 certified
- CCOE certified
- IP66 and IP67
- Certified temperature: –55°C to +70°C*
- Stainless steel or marine grade alloy
- Xenon or LED versions
- Various lens colours
- Optional lens guard
- Telephone or relay initiated

*Depending on version

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Oddicroft Lane
Sutton in Ashfield
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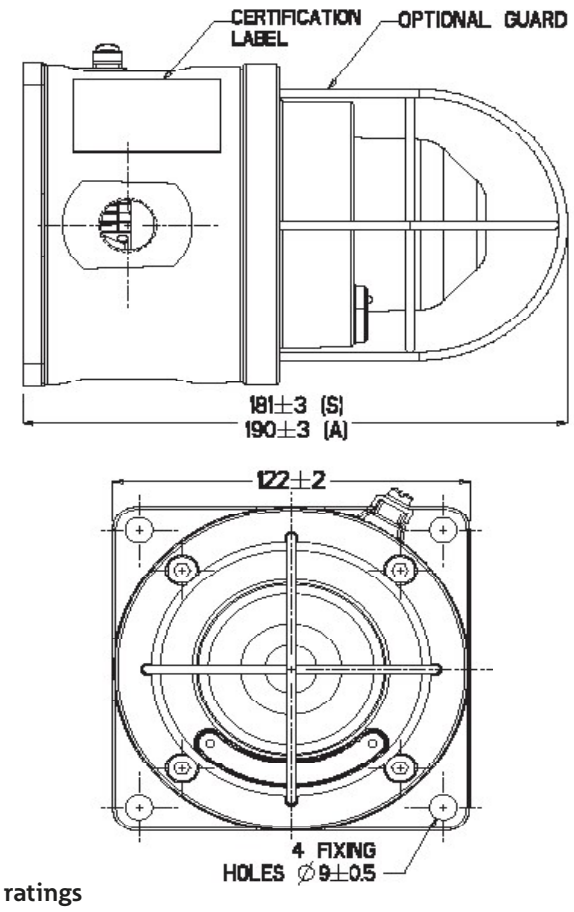
Certifications

ATEX Ex d	Cert. no. Baseefa 03ATEX0222 Certified to: EN60079-0, EN60079-1, EN60079-31 SM87HXB: Ex II 2GD, Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db SM87LED: Ex II 2GD, Ex d IIC T6 Gb, Ex tb IIIC T55°C/ T70°C Db
IECEx Ex d	Cert. no. IECEx BAS 09.0059 Certified to: IEC60079-0, IEC60079-1, IEC60079-31 SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db SM87LED: Ex d IIC T6 Gb, Ex tb IIIC T55°C/ T70°C Db
UL	Listing no. E187894 Class I, Div 1, Groups C & D Class I, Zones 1. (SM87HXB & SM87XBT only)
CSA	Cert no. 96406. (SM87HXB only) Certified to: C22.2 Nos 0, 0.4, 0.5, 9, 30-M1986, 94-M91, 137-M1981 Class I, Div 1. Group D
INMETRO Ex d	SM87HXB: Ex db IIC T5/T6 Gb, Ex tb IIIC T80°C/T95°C Db SM87LED: Ex db IIC T6 Gb, Ex tb IIIC T70°C Db
CQST Ex d	SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/ T80°C/ T95°C Db
SIL	SIL2 certification to IEC61508. Cert. No. 20151119-4786827453

Specifications

Material	SM87HXBS and SM87LEDS: Grade 316 ANC4B stainless steel SM87HXBA and SM87LEDA: LM25 TF marine grade alloy Lens: glass UL version available only in marine grade alloy
Finish	Epoxy paint finish as standard
Certified temp	SM87HXB: ATEX, IECEx, CQST, INMETRO -55°C to +70°C (T5) -55°C to +55°C (T6) UL -55°C to +70°C CSA -50°C to +40°C SM87LED: ATEX, IECEx, CQST, INMETRO -55°C to +55°C* (T6) * Operating temperature is -20°C to +55°C
Weight	SM87HXBS & SM87LEDS: 3.8kg each (approx) SM87HXBA & SM87LEDA: 2kg. each (approx)
Ingress protection	IP66 & IP67
Entries	Up to 4 x M20 / M25 ISO or 1/2" / 3/4" NPT
Terminals	SM87HXB SM87LED: Terminal suitable for 2.5mm2 cable
Relay initiate	Initiation by telephone ringing tone or low voltage control signals
Labels	Duty & tag labels optional

General arrangement drawing (all dimensions in mm)



Electrical ratings

	d.c.		a.c. 50/60Hz				
Voltage	24	48	110	120	220	240	254
Tube energy (Joules) SM87HXB	5	5	6	7	6	7	8
Current consumption SM87HXB	393	175	250	275	120	135	153
Current consumption SM87LED (mA)	165	85	N/A	N/A	N/A	N/A	N/A
Effective intensity (Cd)	29	29	32	39	32	39	44
Peak intensity (Cd)	22213	22213	25061	30187	25061	30187	34174

NOTE: The above figures (Cd) are for a clear lens @ 1Hz flash rate

Multiplying factor for coloured lenses

Red	Blue	Amber	Green	Yellow
0.15	0.12	0.51	0.49	0.36

The photometric data given above has been verified by BSI. Reports are available if required

LED light output - steady or flashing (customer selectable)

	Red	Blue	Amber	Green
Total LED output (candela)	192	64	64	17

LED/lens colour: red, blue, green, amber, yellow (not LED) or clear
Flash rate: 90fpm as standard, other flash rates available on request

Ordering requirements

Flash rate: 60fpm

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Model	Certification	Voltage	Lens/LED colour	Guard	Entries	Tag/duty	Options	Finish
SM87LEDS	B	024	R	Y	1B1R	Y	N	R

Voltage	Code
Xenon (stainless steel)	SM87HXBS
Xenon (alloy)	SM87HXBA
LED Exd (stainless steel)	SM87LEDS
LED Exd (alloy)	SM87LEDA

Certification	Code
ATEX	B
IECEx	J
UL	UL†
CSA	C‡
Chinese(CQST)	Q
INMETRO	DM

† Only SM87HXBA is available UL certified
‡ Only SM87HXB

Voltage	Code
24 V d.c.	024
48 V d.c.	048
110 V a.c. not LED	110
120 V a.c. not LED	120
220 V a.c. not LED	220
240 V a.c. not LED	240
254 V a.c. not LED	254

Colour	Code
Clear	C
Red	R
Blue	B
Green	G
Amber	A
Yellow (not LED)	Y

Guard	Code
None	N
Yes	Y

Entries	Code
M20	1
M25	2
1/2" NPT	3
3/4" NPT	4
Top	*T
Bottom	*B
RHS	*R
LHS	*L

* Prefix position with entry size code
e.g. 1T1B=M20 Top and Bottom entries

Label	Code
None	N
Yes	Y*

* Please specify wording (Note: 15 characters maximum)

Options	Code
Telephone	T*‡
Relay	R*‡
EOL resistor	E*†
None	N

* Not available on UL versions
† Please specify
‡ For SM87LED please specify if steady or flashing is required

Colour	Code
Red	R
Blue	B
Yellow	Y
Yellow/ black stripe	X
Grey	G
White	W
Special	S*

*Please specify

ITEM	Tag	950-XZ-07101	: FZ-07 Sounder Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	70-18	: F&G Devices FZ-07 (Transition Piece Area)			Module	TP
TASK	code	C10001144		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

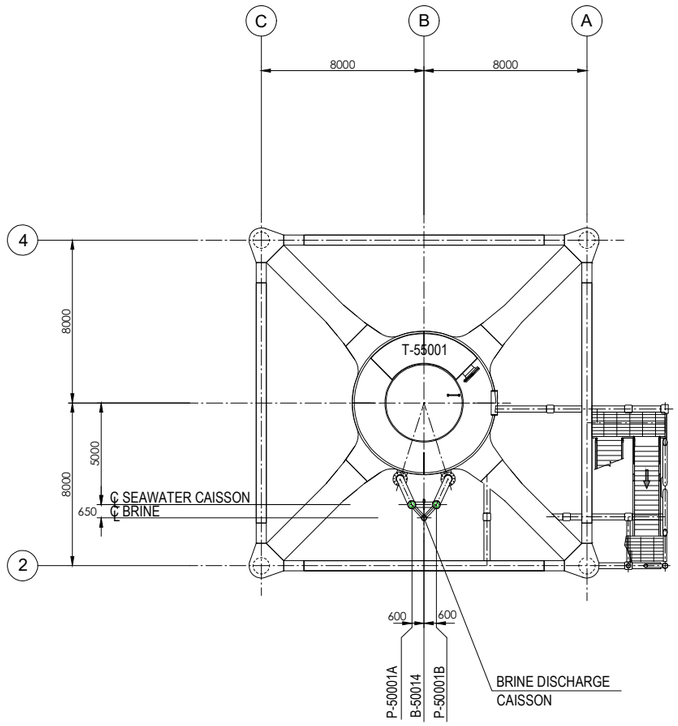
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	OK
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	OK
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

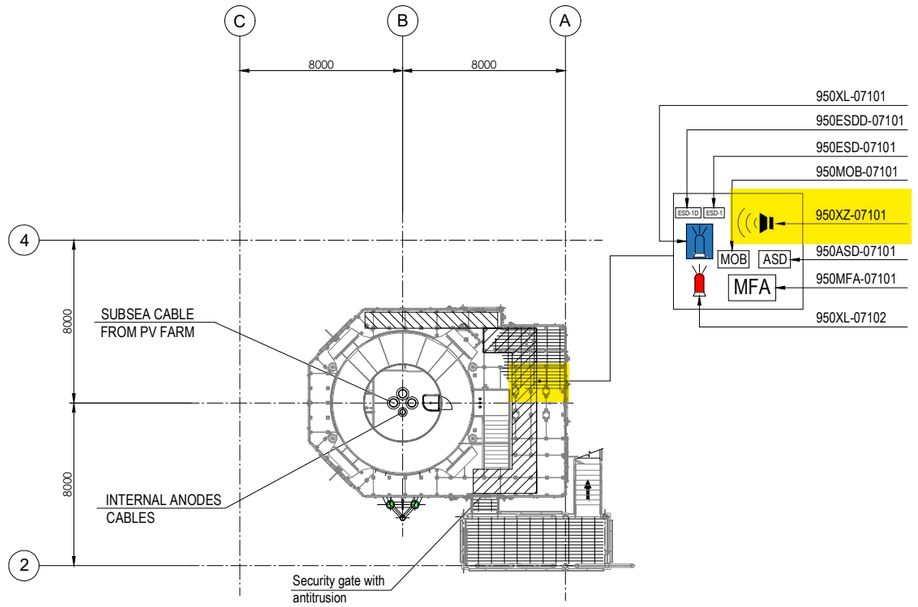
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-18	2025-04-30	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-18T06:09:48.972Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-30T07:23:24.822Z	

DRAWING NO. 123A90-DDL-SAF-DL-30028

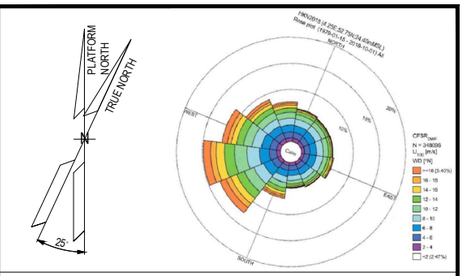
REV. 00



PLAN ON TRANSITION PIECE
EL+21.710 T.O.S.



PLAN ON EXISTING
PLATFORM AT
EL+16.860 T.O.S.



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
01 4. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.

01 ELEVATION
1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACONS ARE 2.4/2.5M

LEGEND

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30028**

REV.:	DATE:	SIGNATURE:
1_A	08/08/24	G.Randi

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

01	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
01	123A90-DDL-SAP-RE-30020	FERA REPORT

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION
P-50001A/B	SEAWATER LIFT PUMPS
T-55001	WASTE WATER TANK

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	1		FIRE BEACON (XL)	1
MOB	MAN OVER BOARD (MOB)	1		FLAMMABLE GAS RELEASE BEACON (XL)	1
ASD	ABANDON SHUTDOWN (ASD)	1	ESD-1	ESD-1 PUSH BUTTON (ESD)	1
MFA	MANUAL FIRE ALARM (MFA)	1	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	10/07/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	12/02/24	MMA	CCA	DLO	ISSUE FOR APPROVAL (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

F & G DETECTORS LAYOUT - BELOW LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 10/07/24

A1	DRAWING NO. 123A90-DDL-SAF-DL-30028	SHEET 001	REV. 01

File Name : 123A90-DDL-SAF-DL-30028 Rev.01

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 950-JE-07101	No.	MARSHALLING CABINET B400-FGS-002

<01>

950-XZ-07101 (1BK, 2BK) — NOTE-2 — C-950-XZ-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07101 (1BK, 3BK) — NOTE-2 — C-950-XL-07101/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

950-XL-07102 (1BK, 3BK) — NOTE-2 — C-950-XL-07102/950-JE-07101 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

1BK	1	1BK
2BK	2	2BK
	SH	
3BK	3	3BK
4BK	4	4BK
	SH	
5BK	5	5BK
6BK	6	6BK
	SH	
SPARE	7	7BK
	8	8BK
	SH	
SPARE	9	9BK
	10	10BK
	SH	
SPARE	11	11BK
	12	12BK
	SH	
	OS	

950-JE-07101/B400-FGS-002

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-07101

1BK	1	950-XZ-07101
2BK	2	
3BK	3	950-XL-07101
4BK	4	
5BK	5	950-XL-07102
6BK	6	
7BK	7	SPARE
8BK	8	
9BK	9	SPARE
10BK	10	
11BK	11	SPARE
12BK	12	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_S	13/03/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT–FGS WIRING DIAGRAMS
950–JE–07101

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

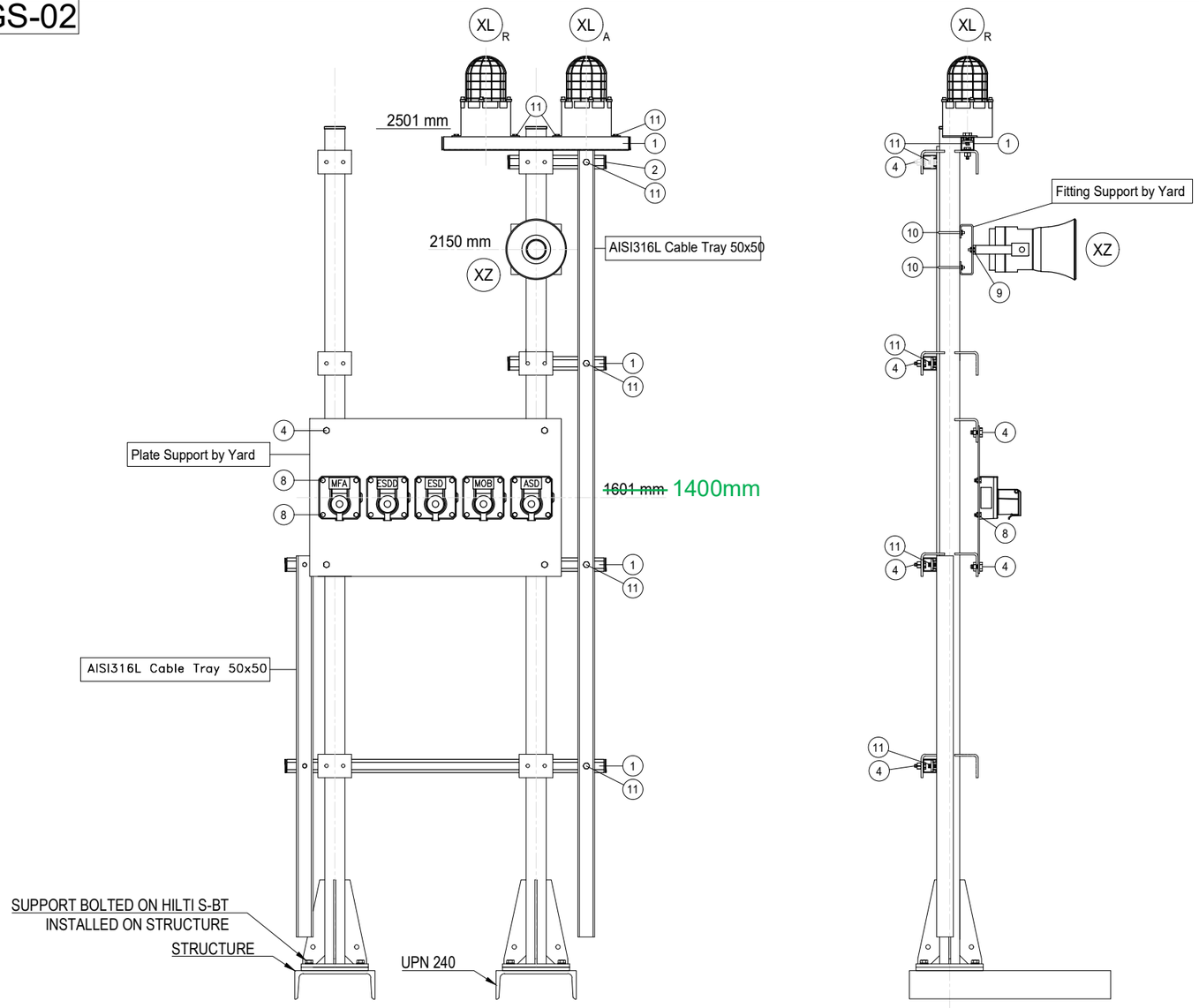
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 074	REV. 01

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

FGS-02

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

REV. 00



POS.	DESCRIPTION	Q.TY
1	AISI 316L U-CHANNEL 41x41	6m
2	LDPE PLUG FOR U-CHANNEL 41x41	8
4	AISI 316L BOLT M10x35 + NUT M10 + WASHER M10	18
8	AISI 316L BOLT M8x35 + NUT M8 + WASHER M8	20
~~9~~	~~AISI 316L BOLT M6x35 + NUT M6 + WASHER M6~~	2
10	AISI 316L 2" U BOLT M8+ N.2 NUT M8 + N.2 WASHER M8 1	2
11	AISI 316L SPRING NUT M6 FOR U-CHANNEL 41X41 + BOLT M6 + WASHER M6	10

POLE	ITEM	DESCRIPTION	TAGNAME
1	XL_A	BEACON - AMBER	950-XL-04101
	XL_R	BEACON - RED	950-XL-04102
	XZ	SOUNDER	950-XZ-04101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-04101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-04101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-04101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-04101
	~~MFA~~	~~MANUAL CALL POINT CONNECTED TO FGS~~	~~950-MFA-04101~~
2 1	XL_A	BEACON - AMBER	950-XL-07101
	XL_R	BEACON - RED	950-XL-07102
	XZ	SOUNDER	950-XZ-07101
	ESDD	MANUAL CALL POINT CONNECTED TO SIS	950-ESDD-07101
	ESD	MANUAL CALL POINT CONNECTED TO SIS	950-ESD-07101
	MOB	MANUAL CALL POINT CONNECTED TO SIS	950-MOB-07101
	ASD	MANUAL CALL POINT CONNECTED TO SIS	950-ASD-07101
	MFA	MANUAL CALL POINT CONNECTED TO FGS	950-MFA-07101

NOTES

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

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
FIRE & GAS DEVISES ON POLE

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

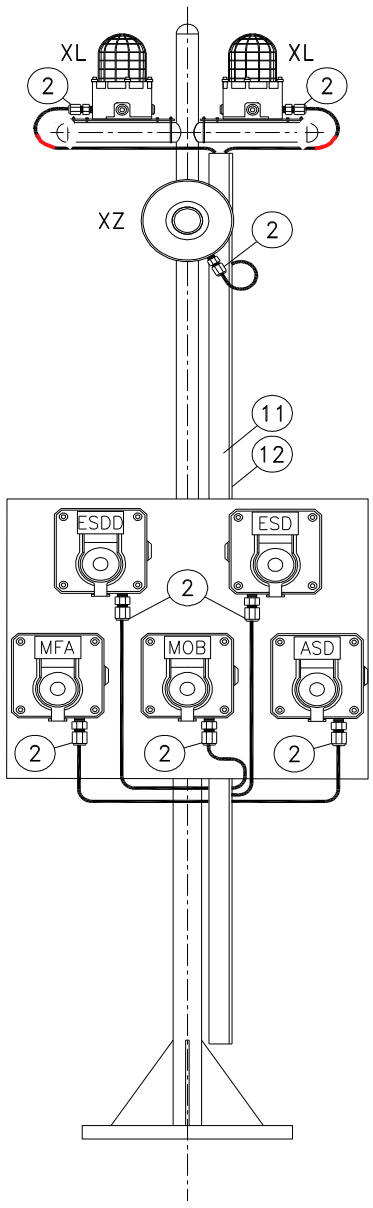
A3	DRAWING NO. 123A90-DDL-IN-DD-40017	SHEET 021	REV. 01

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

REV.:	DATE:	SIGNATURE:
1_J	31/01/25	G.Randi

ROSETTI MARINO SpA

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-07101 (AMBER)
	950-XL-07102 (RED)
	950-XZ-07101
	950-ESDD-07101
	950-ESD-07101
	950-MFA-07101
	950-MOB-07101
	950-ASD-07101

NOTE: Mechanical support is only indicative in this drawing, for real mehanical support refer to Instrument Installation Details, doc. n. 123A90-DDL-IN-DD-40017 - Instrument Installation Details

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

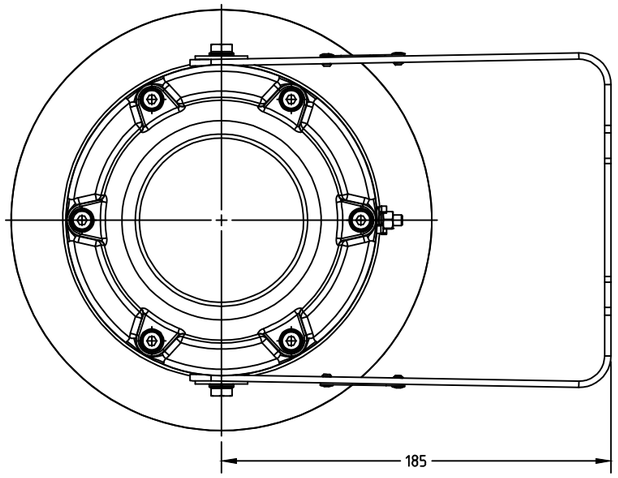
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

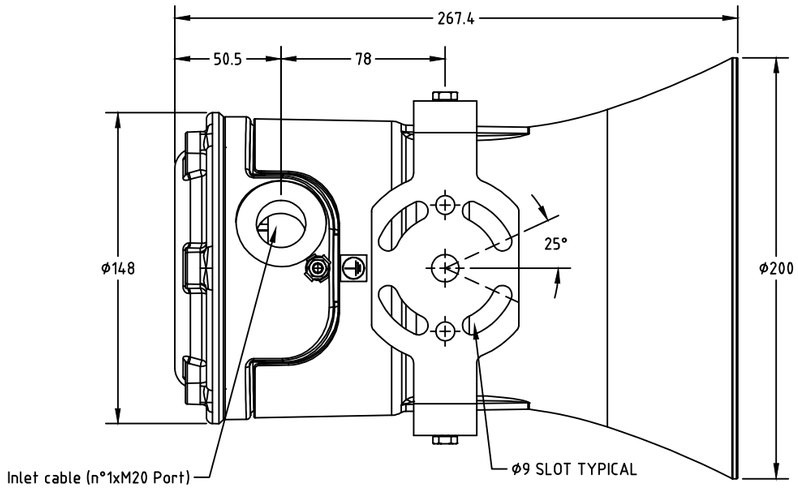
ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	7

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SOUNDER





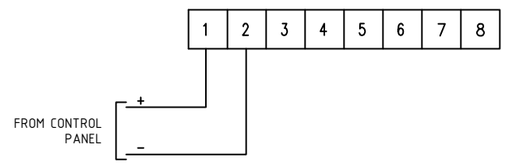
ITEM	DESCRIPTIONS	NR
1	Sounder, MEDC DM3BMSD048DT1BNR	1
2		
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION
QUANTITY

17

NOTE:
DUTY LABEL: EMERGENCY SHUTDOWN ALARM

WIRING



FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
SOUNDER

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 023

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

SOUNDER – TAG

POS.	TAG NUMBER
1	950-XZ-01101
2	950-XZ-01102
3	950-XZ-02101
4	950-XZ-03101
5	950-XZ-03102
6	950-XZ-04101
7	950-XZ-04102
8	950-XZ-04201
9	950-XZ-04202
10	950-XZ-04203
11	950-XZ-05101
12	950-XZ-05102
13	950-XZ-05103
14	950-XZ-05104
15	950-XZ-06101
16	950-XZ-06201
17	950-XZ-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	13/01/25	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
02	10/10/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
01	03/09/24	DB	MO	SM	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	DB	MO	SM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
GENERAL ARRANGEMENT
SOUNDER – TAG

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 024

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 03

SOUNDER

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-XZ-01101	FZ-01 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
2	950-XZ-01102	FZ-01 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
3	950-XZ-02101	FZ-02 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
4	950-XZ-03101	FZ-03 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
5	950-XZ-03102	FZ-03 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
6	950-XZ-04101	FZ-04 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
7	950-XZ-04102	FZ-04 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
8	950-XZ-04201	FZ-04 SOUNDER ACT. - B-400 INDOOR	EMERGENCY SHUTDOWN ALARM
9	950-XZ-04202	FZ-04 SOUNDER ACT. - B-300 INDOOR	EMERGENCY SHUTDOWN ALARM
10	950-XZ-04203	FZ-04 SOUNDER ACT. - B-200 INDOOR	EMERGENCY SHUTDOWN ALARM
11	950-XZ-05101	FZ-05 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
12	950-XZ-05102	FZ-05 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
13	950-XZ-05103	FZ-05 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
14	950-XZ-05104	FZ-05 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
15	950-XZ-06101	FZ-06 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM
16	950-XZ-06201	FZ-06 SOUNDER ACT. - B-100 INDOOR	EMERGENCY SHUTDOWN ALARM
17	950-XZ-07101	FZ-07 SOUNDER ACTIVATION	EMERGENCY SHUTDOWN ALARM

File: 1724000821-IN-DS-00004-02.xlsx
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DB3BM sounders range up to 116dB

Ex d, weatherproof



Overview

The DB3BM is a high power explosion proof sounder, introduced as a replacement for the current DB1 / DB1H with improved functionality and performance. Certified for use in a wide range of temperatures from -60°C to +85°C the Ex enclosure is manufactured in either marine grade alloy or stainless steel with a rugged thermoplastic flare providing a corrosion free and aesthetically pleasing product.

Capable of producing 116 dB @ 1m and with a range of pre-recorded tones, the DB3BM includes an integral volume control which is ideal when a lower output is required.

The unit is provided with versatile control options allowing compatibility with a wide range of control methods and PLCs.

The standard DC unit provides 3 tone stages, each stage has 28 tones available which can be independently selected. The unit can be controlled by reversing the polarity of the power supply (2 stage) or providing a common negative and switching between multiple positive supplies.

The DB3BM proves its versatility by additionally being able to work with a common positive supply and switching the negatives. The tone stages of the DB3BM can also be controlled via voltage free contacts provided by a control panel.

The flexibility of the range continues with a wide range of supply voltages. The short flare option is a worthy addition to the range offering a high SPL in a compact unit.

Features

- UKEX / ATEX / IECEx
  Ex db IIC T4/T5/T6 Gb
  Ex tb IIIC T4/T5/T6 Db
- Certified temperature: –60°C to +85°C
- IP66 & IP67 (terminal only)
- Up to 116 dB output @ 1 m
- Integral volume control
- 28 tones, user selectable
- 3 stage unit remotely switchable
- Tones can be programmed to customer's specification
- DC supply voltage between 12 V and 48 V
- End of line resistor option
- Sounder & beacon combination units available, for further details contact MEDC
- Ex enclosure – marine grade alloy or stainless steel
- Flare - high impact thermoplastic polyester
- Stainless steel mounting bracket and cover screws
- Mounting bracket has ratchet facility as standard
- Swivel bracket standard on Stainless steel unit, optional on Alloy units



Stainless steel body, short flare version

ATEX IECEx UKCA

Eaton
Unit B, Sutton Parkway
Oddicroft Lane
Sutton in Ashfield
United Kingdom
NG17 5FB

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All other trademarks are property of their respective owners.

Powering Business Worldwide

All specifications, dimensions, weights and tolerances are nominal (typical) and Eaton reserve the right to vary all data without prior notice.
No liability is accepted for any consequence of use.

Certifications

ATEX Ex db	Cert. no. UL 21 ATEX02559X. Certified to: EN IEC 60079-0, EN 60079-1, 31 Ex II 2GD, Ex db IIC T3/T4/T5/T6 Gb, Ex tb IIIC T200°C/T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
IECEx Ex db	Cert. no. IECEx ULD 21.0017X. Certified to: IEC60079-0,1,31 Ex db IIC T3/T4/T5/T6 Gb, Ex tb IIIC T200°C/T135°C/T100°C/T85°C Db, IP66 (IP65 short flare)
UKEX Ex db	Cert. no. UL21UKEX2209X. Certified to: EN IEC 60079-0, EN 60079-1, 31 Ex II 2GD, Ex db IIC T3/T4/T5/T6 Gb, Ex tb IIIC T200°C/T135°C/T100°C/T85°C Db IP66 (IP65 short flare)
Safe Area	EN 61010-1, EN 60529, EN61000-6

Specifications

Material	Ex enclosure – marine grade alloy or stainless steel Flare - flame retardant, high impact, UV stable, thermoplastic polyester (UV stability tested to ISO 4892 part 3) Hardware - bracket, fixings and captive cover screws in 316 stainless steel
Fire retardancy	Outer flare - thermoplastic polyester. V0 flammability rating
Finish	Body – alloy: painted black. Stainless steel: painted black. Flare - natural black, natural red or painted as specified
Voltage	DC: 12 - 48 V. AC: Up to 254 V. if using EOL resistor/s the maximum power dissipation must be limited to 3 W.
Weight	Alloy - 4.4 kg, stainless steel 8.35 kg based on long flare DC unit
Ingress protection	IP66 & IP67 (terminal only). IP65 short flare
Entries	Up to 2 x M20 or M25 or ½"or ¾" NPT. Blanking plug available
Terminals	AC: 4 x 1.5mm² (loop in / out power), 3 x 2.5mm² (tone selection) (standard unit only) DC: 8 x 2.5mm² (8 for loop in / out power and tone selection) (standard unit only)
Mounting arrangement	Stainless steel bracket with ratchet facility, optional swivel bracket available. Swivel standard on stainless steel unit
Labels	Optional duty and tag labels available
Tone information	28 tones per stage. Additional custom tones available (contact MEDC) Suitable for use with 200 Hz tones
Relative Humidity	99% Non-condensing

Tone activation and selection

Voltage	Unit	No.of stages	Tone activation	Tone selection
DC	Standard	1	Apply power	1 x DIP switch
		2	Reverse polarity	2 x DIP switches
			Common -ve with 2 +ve supplies	2 x DIP switches
			*Common +ve with 2 -ve supplies	2 x DIP switches
		3	Common -ve with 3 +ve supplies	3 x DIP switches
	Alternative tone activation (Option M)	2	*Common -ve with 2 +ve supplies	2 x DIP switches
		3	Common +ve with 3 -ve supplies	3 x DIP switches
	Alternative tone activation (remote) (Option R)	1-5	Volt free activation (remote switching)	1 x DIP switch for stage 1. Tone pre-selected for subsequent stages
AC	Standard	1	Apply power	1 x DIP switch
	Alternative tone activation (remote) (Option R)	1-2	Volt free activation (remote switching)	1 x DIP switch for stage 1. Tone preselected for the 2nd stage

*Reverse polarity line monitoring can be used with common positive or negative switching to give up to 2 operational stages and a 3rd monitoring connection. An EOL resistor can be fitted as shown in the technical manual. All connection details are shown in the technical manual.

Current consumption: Based on a continuous 970Hz tone

Voltage	Current for IIC unit	Current for IIIC unit
12 Vdc	700 mA	716 mA
24 Vdc	329 mA	339 mA
48 Vdc	171 mA	173 mA
110 Vac	115 mA	122 mA
120 Vac	106 mA	113 mA
220 Vac	59 mA	63 mA
230 Vac	52 mA	55 mA
240 Vac	55 mA	58 mA
254 Vac	59 mA	63 mA

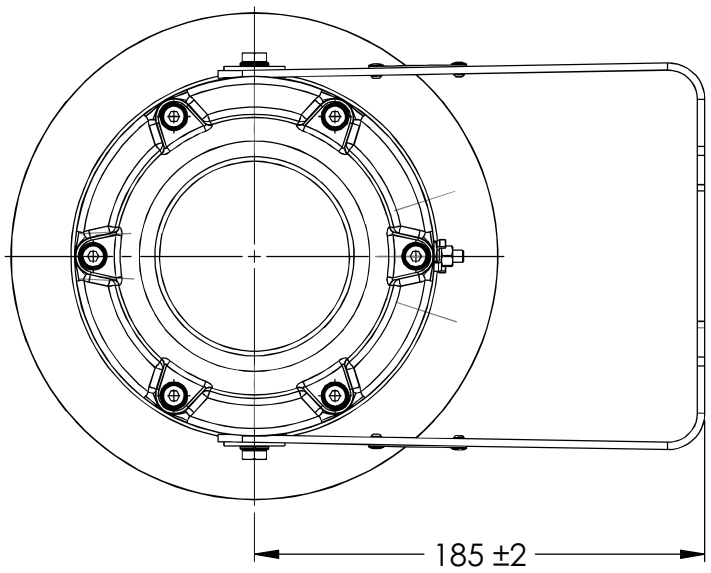
Certified temperature	Ex d/UL min	Max
	-60°C	+85°C

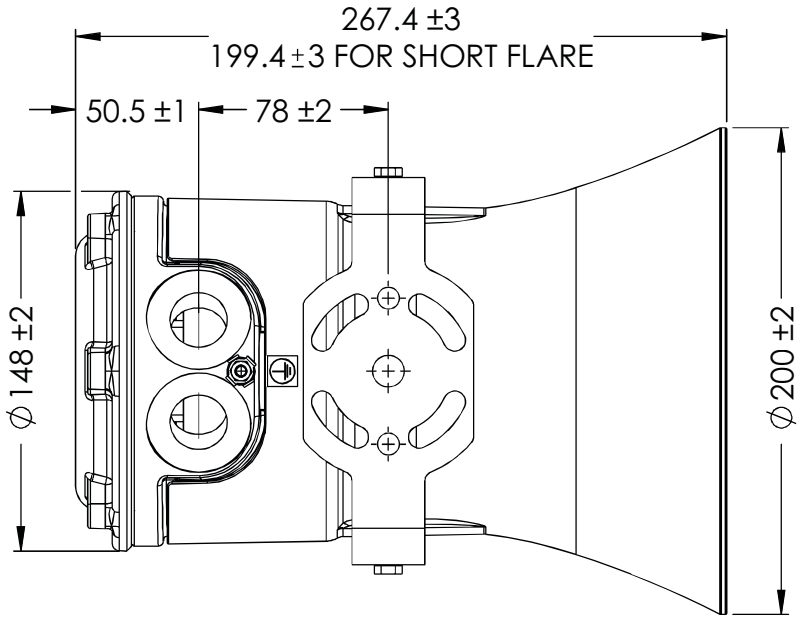
Operating temperature at launch (DC Only): -40 °C min +85 °C max
-55 °C as standard to follow. Please contact MEDC for low temperature options

Max output (dB) 1400Hz @ 1m	Short Flare	Long Flare
	113 dB	116 dB

For Labels and Entries select any option as required. For Options select either (N) None or (E) EOL as required
Tolerance +/-3dB. Please see the technical manual for tone specific SPL values

General arrangement drawing (all dimensions in mm)





Ordering requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Model: DB3BM

Material: S

Finish	Code
Alloy	A
Stainless Steel	S

Ex Certification: D

Ex Certification	Code
UKEX/ATEX Ex d	D
IECEx Ex d	J
Weatherproof	W

Voltage: 048

Voltage	Code
12-48 Vdc	048‡
110 Vac	110
120 Vac	120*
220 Vac	220
230 Vac	230
240 Vac	240*
254 Vac	254

*Complies with UL regulated power supply requirements

Labels: DT

Labels	Code
None	N
Duty	D*
Tag	T*

*Please specify

Entries: 1B

Entries	Code
1 x M20	1B
2 x M20	2B
2 x M20 inc 1 x plug	2BP
1 x ½"NPT	1C
2 x ½" NPT	2C
2 x ½" NPT inc 1 x plug	2CP
1 x M25	1D
2 x M25	2D
2 x M25 inc 1x plug	2DP
1 x ¾" NPT	1E
2 x ¾" NPT	2E
2 x ¾" NPT inc 1x plug	2EP

Options: N

Options	Code
None	N
Swivel bracket	B‡
EOL	E*
Alternative tone activation	M**
Volt free activation (remote)	R**
Short flare	S
Custom tones (not std 27)	TΔ

‡ Alloy only - stainless steel has swivel as standard
*Specify value max power dissipation is 3W
**These options cannot be selected together
ΔSpecify details

Finish: R (RAL 3020)

Finish	Code
Natural black	N
Natural red	R
Yellow	Y
Grey	G
Blue	B
Special	S*

*Please specify

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