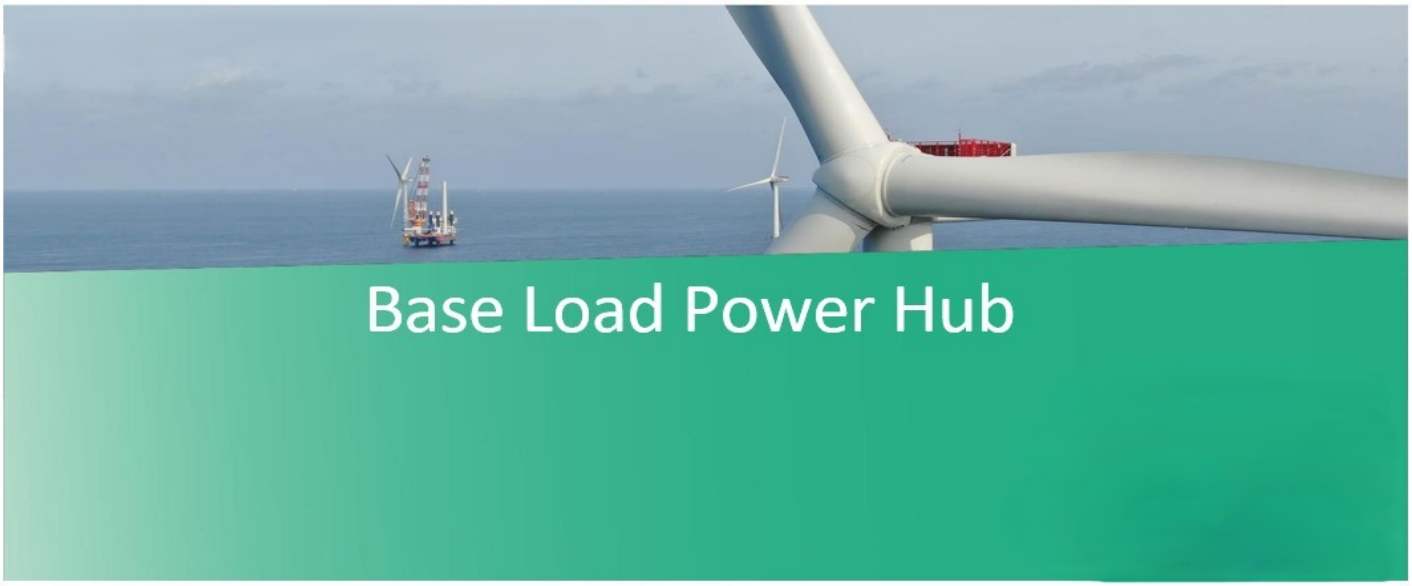
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM

79
Emergency Shutdown systems

SUBSYSTEM

79-13

Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

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

Sub System N°:	79-13	Tick as appropriate	ONSHORE	O
Description:	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	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:	2025-01-03	
System:	79	/	Emergency Shutdown systems		
SubSystem:	79-13	/	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)		

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 13

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-01-07	2025-01-07	2025-01-07	2025-01-07
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-01-07T08:34:30.723Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-01-07T09:59:05.696Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-07T13:48:39.951Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-01-07T13:48:45.791Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 79-13 & process: MC

Instrumental	79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-ASD-04101	FZ-04 Abandon Shutdown Activation	ONSHORE	C10000956	CJX00	100	2025-01-02	RFC 1
950-ESD-04101	FZ-04 ESD-1 Push Button Activation	ONSHORE	C10000961	CJX00	100	2025-01-02	RFC 1
950-ESDD-04101	FZ-04 ESD-1D Push Button Activation	ONSHORE	C10000966	CJX00	100	2025-01-02	RFC 1
950-MOB-04101	FZ-04 Man Over Board Activation	ONSHORE	C10001075	CJX00	100	2025-01-02	RFC 1
C-950-ASD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000150	CJX10	100	2025-01-02	RFC 1
C-950-ESD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000152	CJX10	100	2025-01-02	RFC 1
C-950-ESDD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000153	CJX10	100	2025-01-02	RFC 1
C-950-MOB-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000151	CJX10	100	2025-01-02	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 79 Emergency Shutdown systems

SUBSYSTEM 79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002288	B	C-950-ASD-04101/00-JE-22001 C10000150	Identification tag wires is wrong both side . (C-950-ASD-04101/00-JE-22001).	.		Gtangianu 2025-01-02			
C30002289	B	C-950-ASD-04101/00-JE-22001 C10000150	The identification tag wires is outside the grafoplast.See attached photo.	.		Gtangianu 2025-01-02			
C30002292	B	950-ASD-04101 C10000956	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02			
C30002302	B	950-ASD-04101 C10000956	The terminal crimped on the earthing conductor is not typical installation. See attached photo.	.		Gtangianu 2025-01-02			
C30002303	B	950-ESD-04101 C10000961	The terminal crimped on the earthing conductor is not typical installation. See attached photo.	.		Gtangianu 2025-01-02			
C30002304	B	950-ESD-04101 C10000961	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02			
C30002305	B	C-950-ESD-04101/00-JE-22001 C10000152	Identification tag wires missing both side the (C-950-ESD-04101/00-JE-22001).	.		Gtangianu 2025-01-02			
C30002306	B	C-950-ESD-04101/00-JE-22001 C10000152	black plastic cover support is missing below the instrument (C-950-ESD-04101).	.		Gtangianu 2025-01-02			
C30002307	B	950-ESDD-04101 C10000966	Painting is damage on the instrument. (950-ESDD-04101). See attached photo.	.		Gtangianu 2025-01-02			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 79 Emergency Shutdown systems

SUBSYSTEM 79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002308	B	950-ESDD-04101 C10000966	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02			
C30002309	B	950-MOB-04101 C10001075	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02			
C30002310	B	C-950-ESDD-04101/00-JE-22001	Identification tag wire is wrong side (00-JE-22001).	.		Gtangianu 2025-01-02			
C30002312	B	C-950-MOB-04101/00-JE-22001 C10000151	Identification tag wire is wrong side (00-JE-22001).	.		Gtangianu 2025-01-02			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 79 Emergency Shutdown systems

SUBSYSTEM 79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002288	B	C-950-ASD-04101/00-JE-22001 C10000150	Identification tag wires is wrong both side . (C-950-ASD-04101/00-JE-22001).	.		Gtangianu 2025-01-02	2025-02-20	JKrizanic 2025-02-20	2025-02-20
C30002289	B	C-950-ASD-04101/00-JE-22001 C10000150	The identification tag wires is outside the grafoplast.See attached photo.	.		Gtangianu 2025-01-02	2025-02-20	JKrizanic 2025-02-20	2025-02-20
C30002292	B	950-ASD-04101 C10000956	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30002302	B	950-ASD-04101 C10000956	The terminal crimped on the earthing conductor is not typical installation. See attached photo.	.		Gtangianu 2025-01-02	2025-01-21	APolo 2025-01-21	2025-01-21
C30002303	B	950-ESD-04101 C10000961	The terminal crimped on the earthing conductor is not typical installation. See attached photo.	.		Gtangianu 2025-01-02	2025-01-29	AAndreani 2025-01-29	2025-01-29
C30002304	B	950-ESD-04101 C10000961	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30002305	B	C-950-ESD-04101/00-JE-22001 C10000152	Identification tag wires missing both side the (C-950-ESD-04101/00-JE-22001).	.		Gtangianu 2025-01-02	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30002306	B	C-950-ESD-04101/00-JE-22001 C10000152	black plastic cover support is missing below the instrument (C-950-ESD-04101).	.		Gtangianu 2025-01-02	2025-02-03	Gtangianu 2025-02-03	2025-02-03
C30002307	B	950-ESDD-04101 C10000966	Painting is damage on the instrument. (950-ESDD-04101). See attached photo.	.		Gtangianu 2025-01-02	2025-02-12	APolo 2025-02-12	2025-02-12

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 79 Emergency Shutdown systems

SUBSYSTEM 79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002308	B	950-ESDD-04101 C10000966	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30002309	B	950-MOB-04101 C10001075	lock washers is missing rear the panel for all bolts. See attached photo.	.		Gtangianu 2025-01-02	2025-01-21	AAndreani 2025-01-21	2025-01-21
C30002310	B	C-950-ESDD-04101/00-JE-22001	Identification tag wire is wrong side (00-JE-22001).	.		Gtangianu 2025-01-02	2025-02-20	JKrizanic 2025-02-20	2025-02-20
C30002312	B	C-950-MOB-04101/00-JE-22001 C10000151	Identification tag wire is wrong side (00-JE-22001).	.		Gtangianu 2025-01-02	2025-02-20	JKrizanic 2025-02-20	2025-02-20

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002312

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000151	1.4 Discipline	Instrumental
1.2 Item	C-950-MOB-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

Identification tag wire is wrong side (00-JE-22001).

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002288

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000150	1.4 Discipline	Instrumental
1.2 Item	C-950-ASD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

Identification tag wires is wrong both side .
(C-950-ASD-04101/00-JE-22001).

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002289

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000150	1.4 Discipline	Instrumental
1.2 Item	C-950-ASD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

The identification tag wires is outside the grafoplast.See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


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31-TB-2-00JE-22001/C950-MOB-01
32-TB-2-00JE-22001/C950
33-TB-2-00JE-22001/C950-ESD-01101-1
202 GRAFOPLAST 202 GRAFOPLAST 202
34-TB-2-00JE-22001/C950-ESD-01101-8
35-TB-2-00JE-22001/C950-ESDD-01101-1
36-TB-2-00JE-22001/C950-ESDD-01101-8
37-TB-2-00JE-22001/C950-ASD-41101-1
38-TB-2-00JE-22001/C950-ASD-41101-8
41-TB-2-00JE-22001/C950-ESD-41101-1
42-TB-2-00JE-22001/C950-ESD-41101-8
43-TB-2-00JE-22001/C950-ESDD-41101-1
44-TB-2-00JE-22001/C950-ESDD-41101-8

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002292

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000956	1.4 Discipline	Instrumental
1.2 Item	950-ASD-04101	FZ-04 Abandon Shutdown Activation	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

lock washers is missing rear the panel for all bolts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

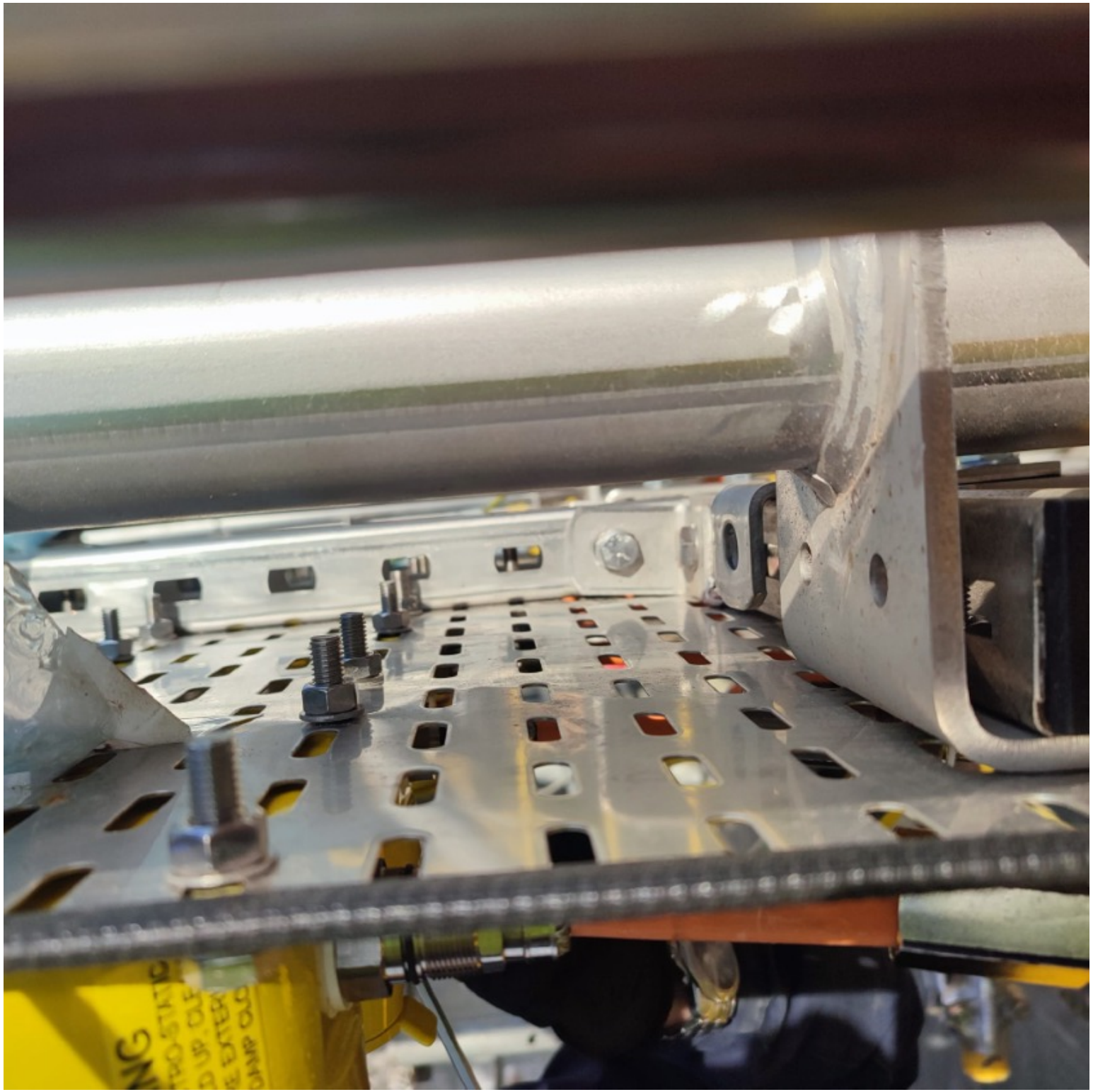
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002302

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000956	1.4 Discipline	Instrumental
1.2 Item	950-ASD-04101		FZ-04 Abandon Shutdown Activation
1.3 Subsystem	79-13		Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

2 - OBSERVATION

The terminal crimped on the earthing conductor is not typical installation. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-21

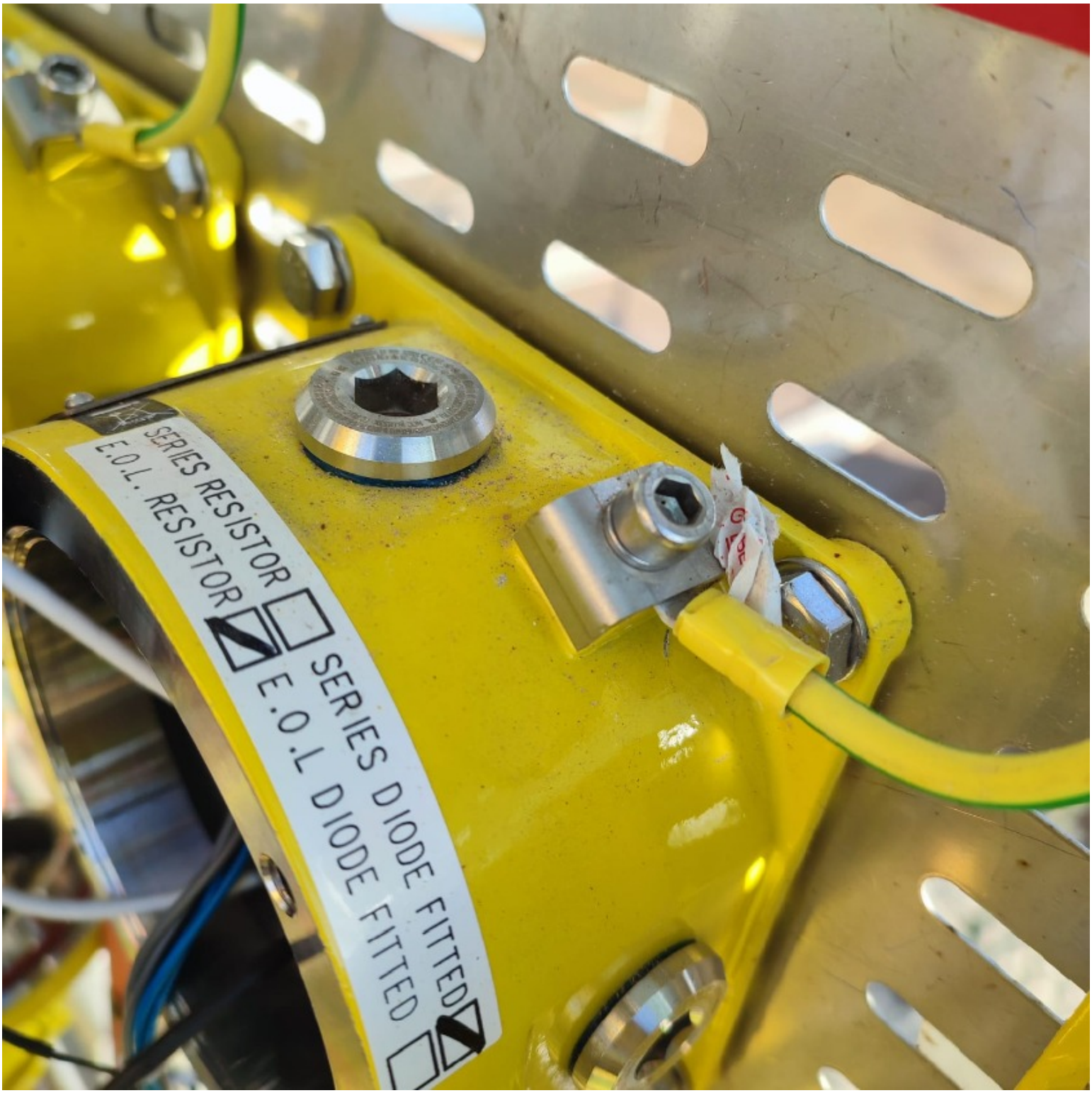
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SERIES RESISTOR
E.O.L. RESISTOR
SERIES DIODE FITTED
E.O.L DIODE FITTED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002303

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000961	1.4 Discipline	Instrumental
1.2 Item	950-ESD-04101		FZ-04 ESD-1 Push Button Activation
1.3 Subsystem	79-13		Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)

2 - OBSERVATION

The terminal crimped on the earthing conductor is not typical installation. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-29

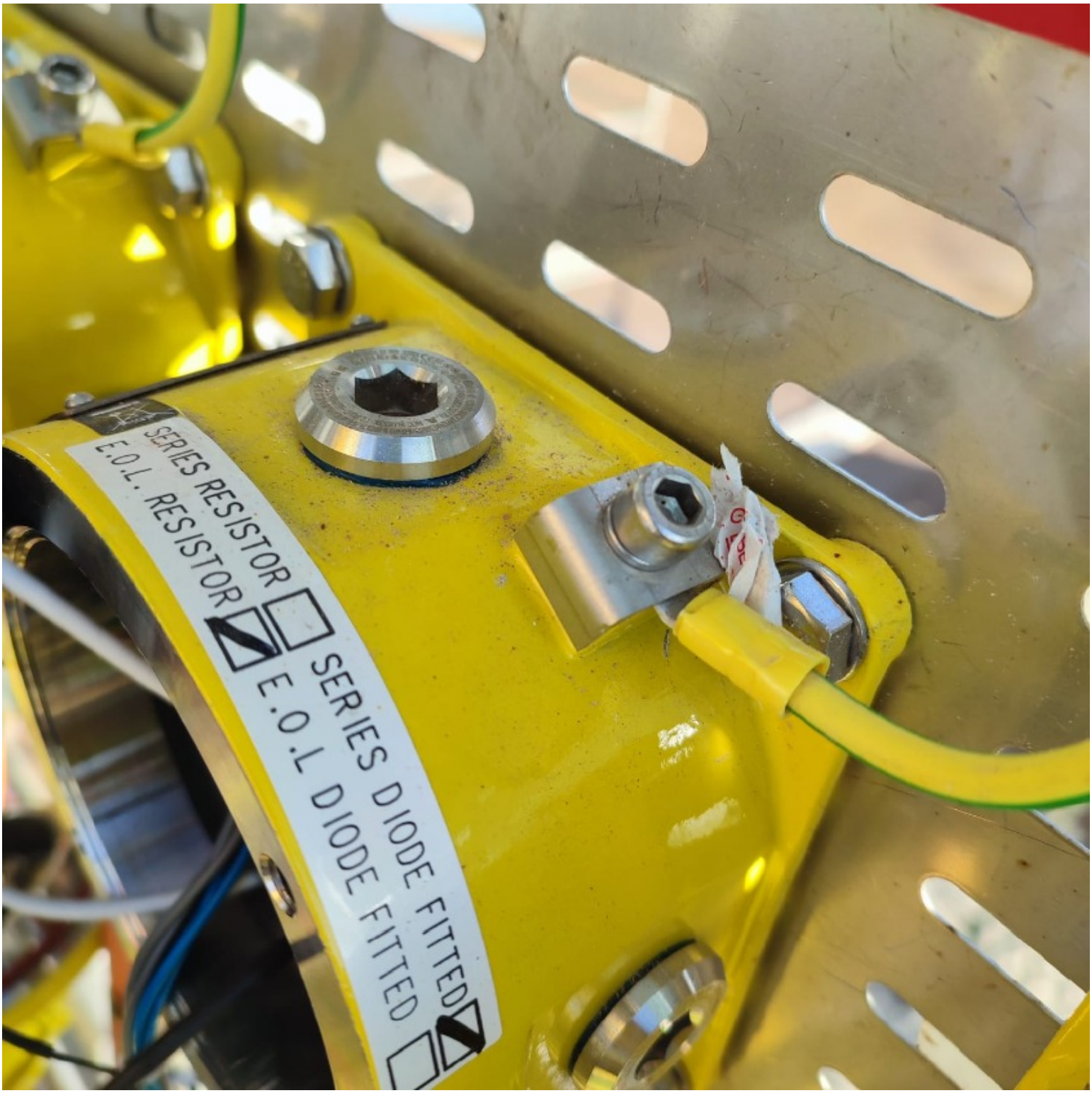
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SERIES RESISTOR
E.O.L. RESISTOR
SERIES DIODE FITTED
E.O.L DIODE FITTED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002304

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000961	1.4 Discipline	Instrumental
1.2 Item	950-ESD-04101	FZ-04 ESD-1 Push Button Activation	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

lock washers is missing rear the panel for all bolts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

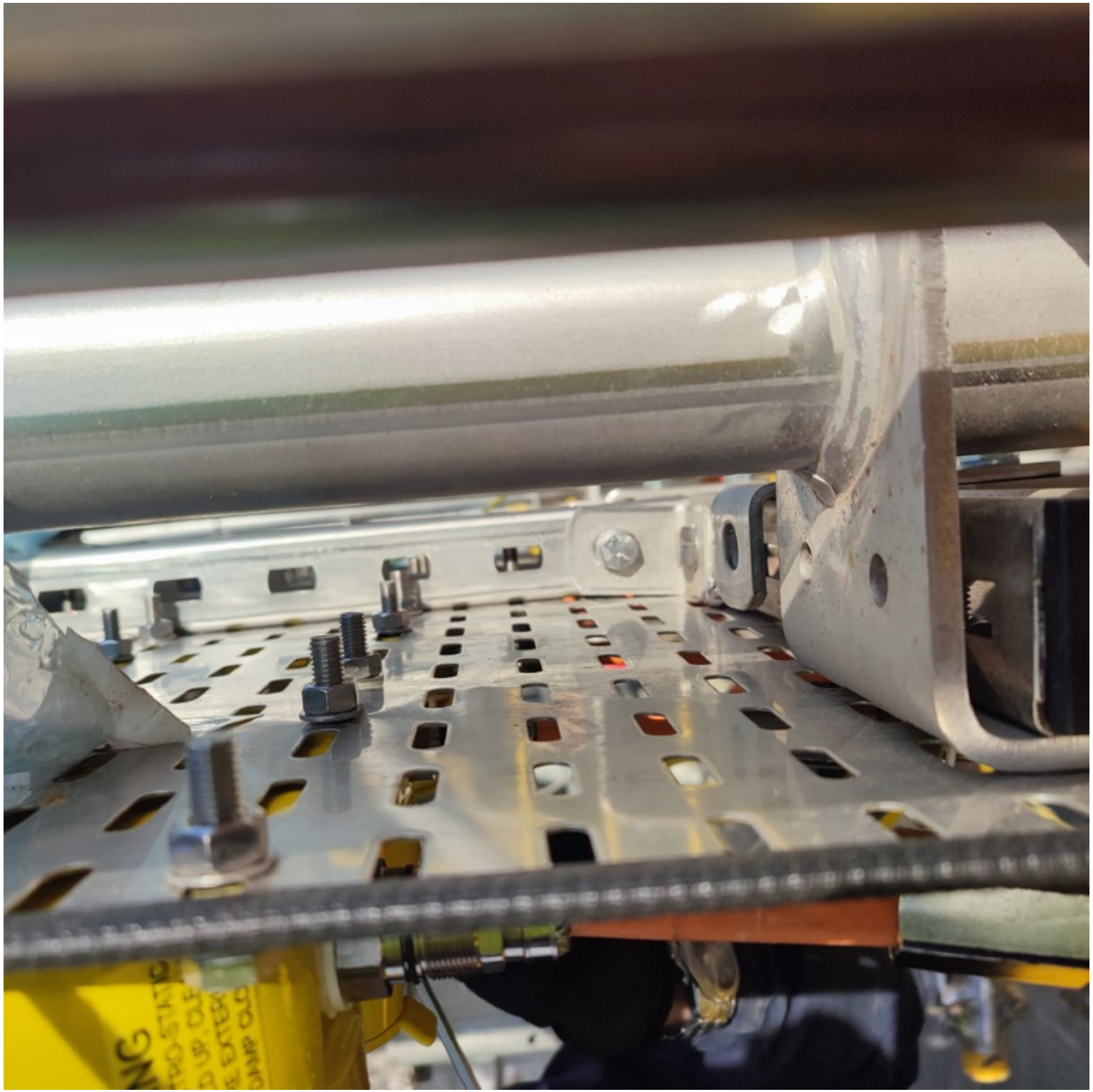
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002305

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000152	1.4 Discipline	Instrumental
1.2 Item	C-950-ESD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

Identification tag wires missing both side the (C-950-ESD-04101/00-JE-22001).

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-04-08

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002306

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000152	1.4 Discipline	Instrumental
1.2 Item	C-950-ESD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

black plastic cover support is missing below the instrument (C-950-ESD-04101).

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-02-03

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002307

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000966	1.4 Discipline	Instrumental
1.2 Item	950-ESDD-04101	FZ-04 ESD-1D Push Button Activation	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

Painting is damage on the instrument. (950-ESDD-04101). See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SERIES DIODE FITTED
E.O.L DIODE FITTED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002308

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000966	1.4 Discipline	Instrumental
1.2 Item	950-ESDD-04101	FZ-04 ESD-1D Push Button Activation	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

lock washers is missing rear the panel for all bolts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

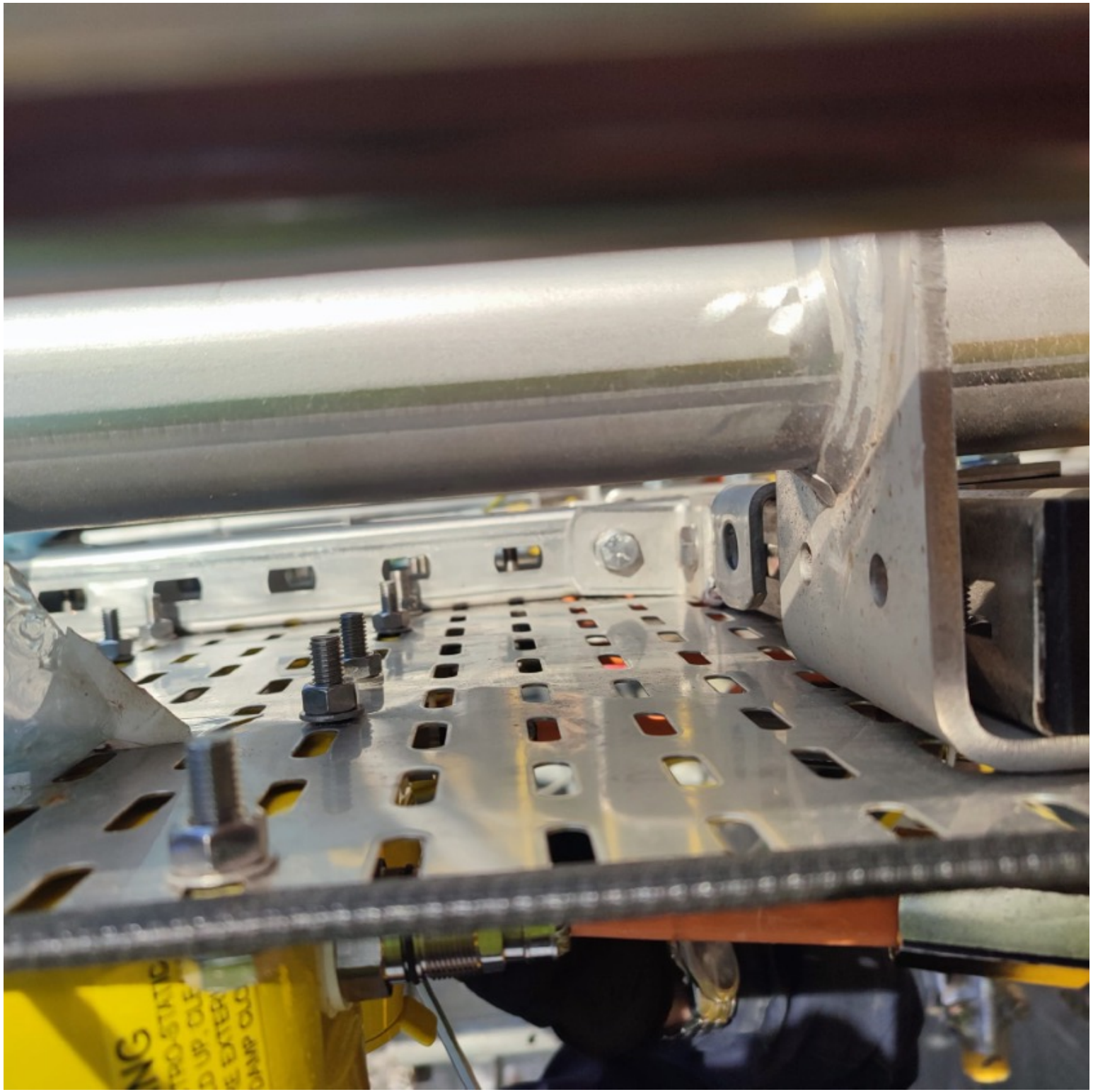
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002309

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001075	1.4 Discipline	Instrumental
1.2 Item	950-MOB-04101	FZ-04 Man Over Board Activation	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

lock washers is missing rear the panel for all bolts. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-01-21

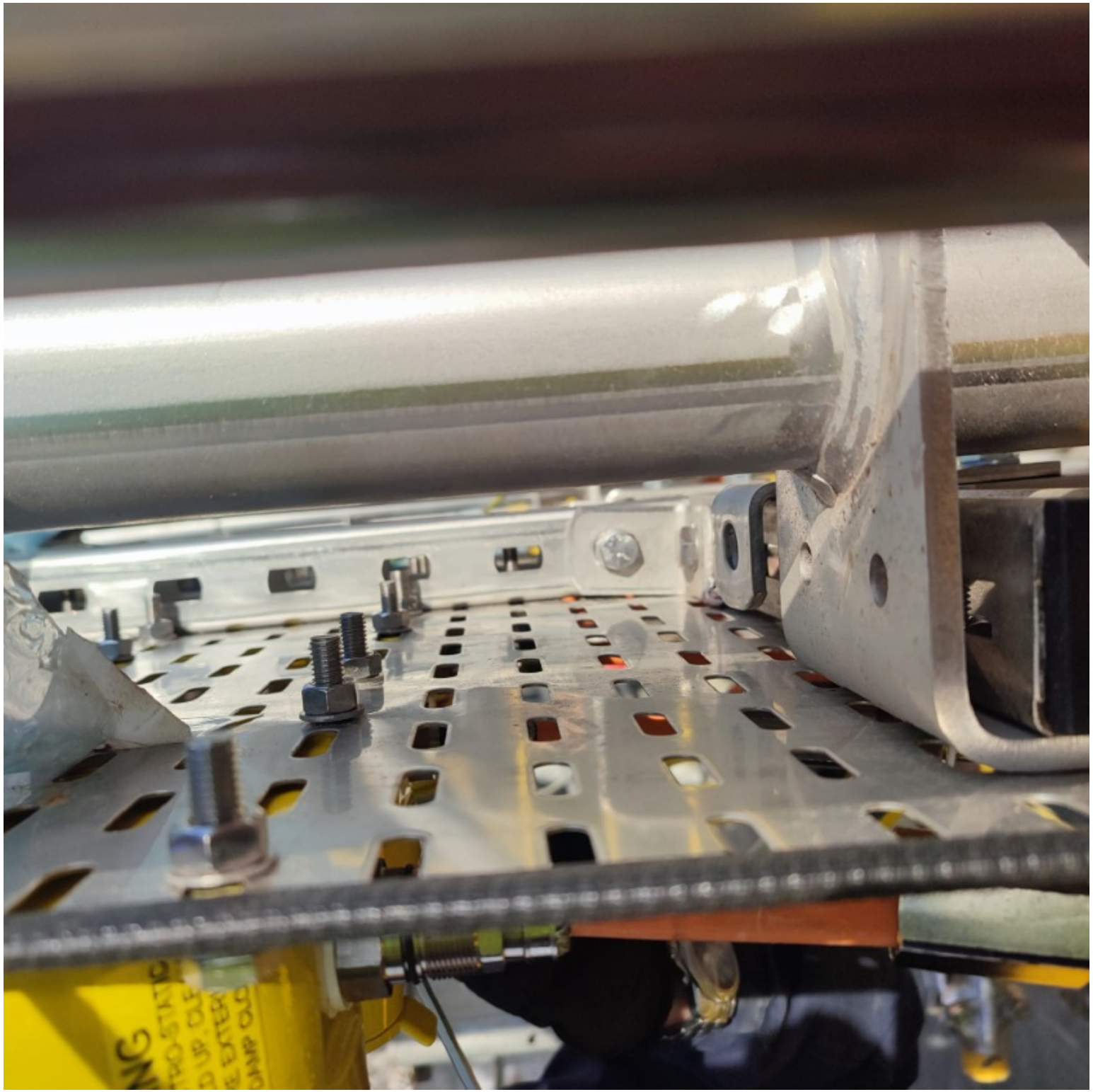
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002310

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000153	1.4 Discipline	Instrumental
1.2 Item	C-950-ESDD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	
1.3 Subsystem	79-13	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	

2 - OBSERVATION

Identification tag wire is wrong side (00-JE-22001).

Name: Giovanni Tangianu

Date: 2025-01-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

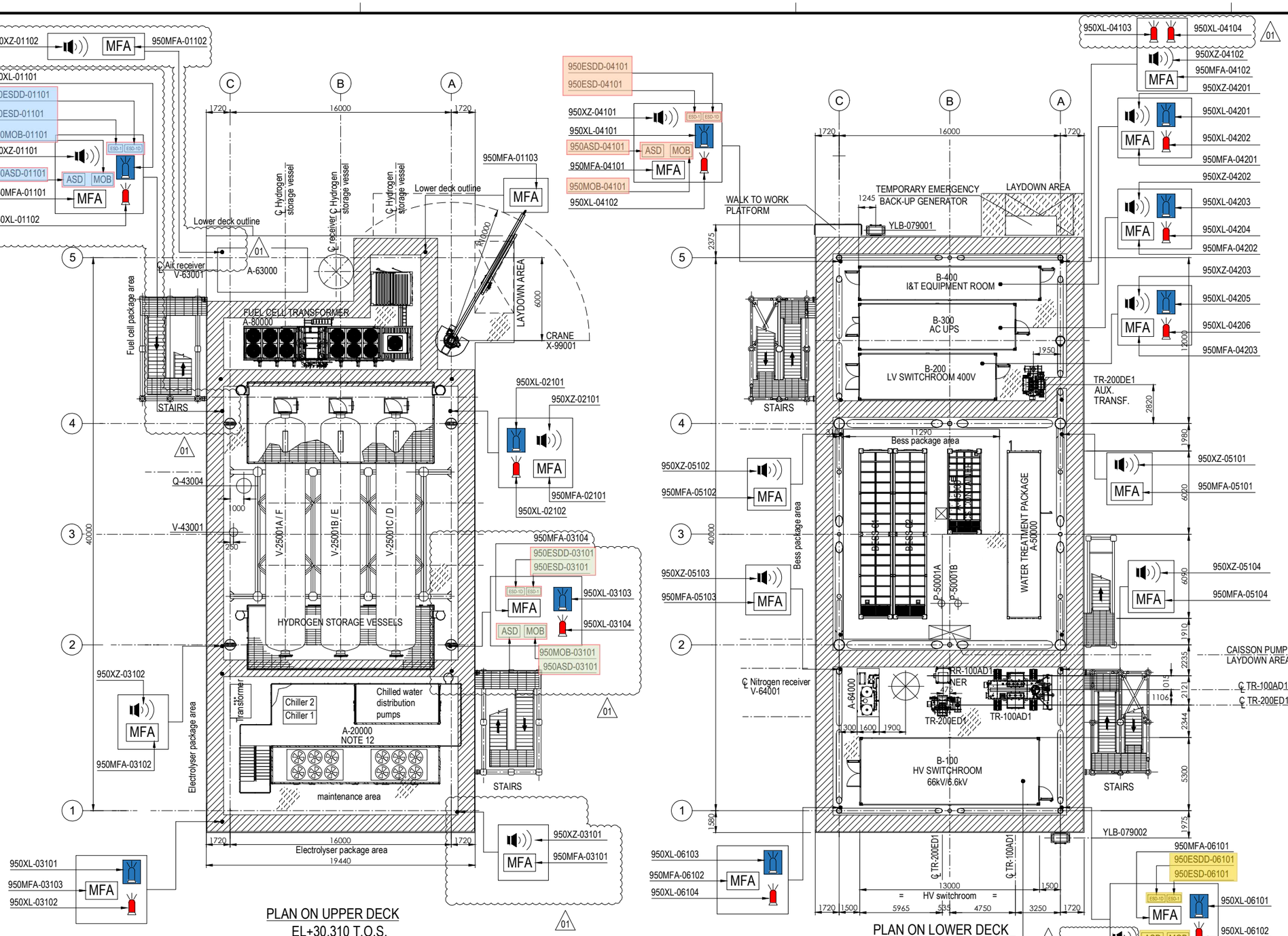
Date:

Signature:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 01



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

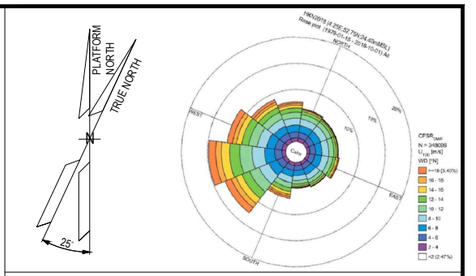
PLAN ON LOWER DECK
EL+23.310 T.O.S.

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

79-11 - Emergency Shutdown Systems (SIS) - Devices FZ-01 (Fuel Cell Area)
79-12 - Emergency Shutdown Systems (SIS) - Devices FZ-03 (Electrolyser Area)
79-13 - Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)
79-14 - Emergency Shutdown Systems (SIS) - Devices FZ-06 (B-100 HV/MV Switchroom Area)

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL)	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL)	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.

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

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

HOLDS

REFERENCE DOCUMENTS

	123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
	123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
01	123A90-DDL-SAF-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 - LOWER & UPPER 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-30027	SHEET 002	REV. 01

File Name : 123A90-DDL-SAF-DL-30027 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: 79-13 & process: MC & discipline : I

Instrumental	79-13 Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
950-ASD-04101	FZ-04 Abandon Shutdown Activation	ONSHORE	C10000956	CJX00	100	2025-01-02	RFC 1
950-ESD-04101	FZ-04 ESD-1 Push Button Activation	ONSHORE	C10000961	CJX00	100	2025-01-02	RFC 1
950-ESDD-04101	FZ-04 ESD-1D Push Button Activation	ONSHORE	C10000966	CJX00	100	2025-01-02	RFC 1
950-MOB-04101	FZ-04 Man Over Board Activation	ONSHORE	C10001075	CJX00	100	2025-01-02	RFC 1
C-950-ASD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000150	CJX10	100	2025-01-02	RFC 1
C-950-ESD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000152	CJX10	100	2025-01-02	RFC 1
C-950-ESDD-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000153	CJX10	100	2025-01-02	RFC 1
C-950-MOB-04101/00-JE-22001	PUSH BUTTON / MARSHALLING PCS	ONSHORE	C10000151	CJX10	100	2025-01-02	RFC 1

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-950-ASD-04101/00-JE-22001 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	79-13 : Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)			Module	LD/UD	
TASK	code	C10000150	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-ASD-04101	To	00-JE-22001		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	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.	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		2,74	Ω
	SCREEN		2,74	Ω
	EARTH		NA	Ω
	ARMr		2,74	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

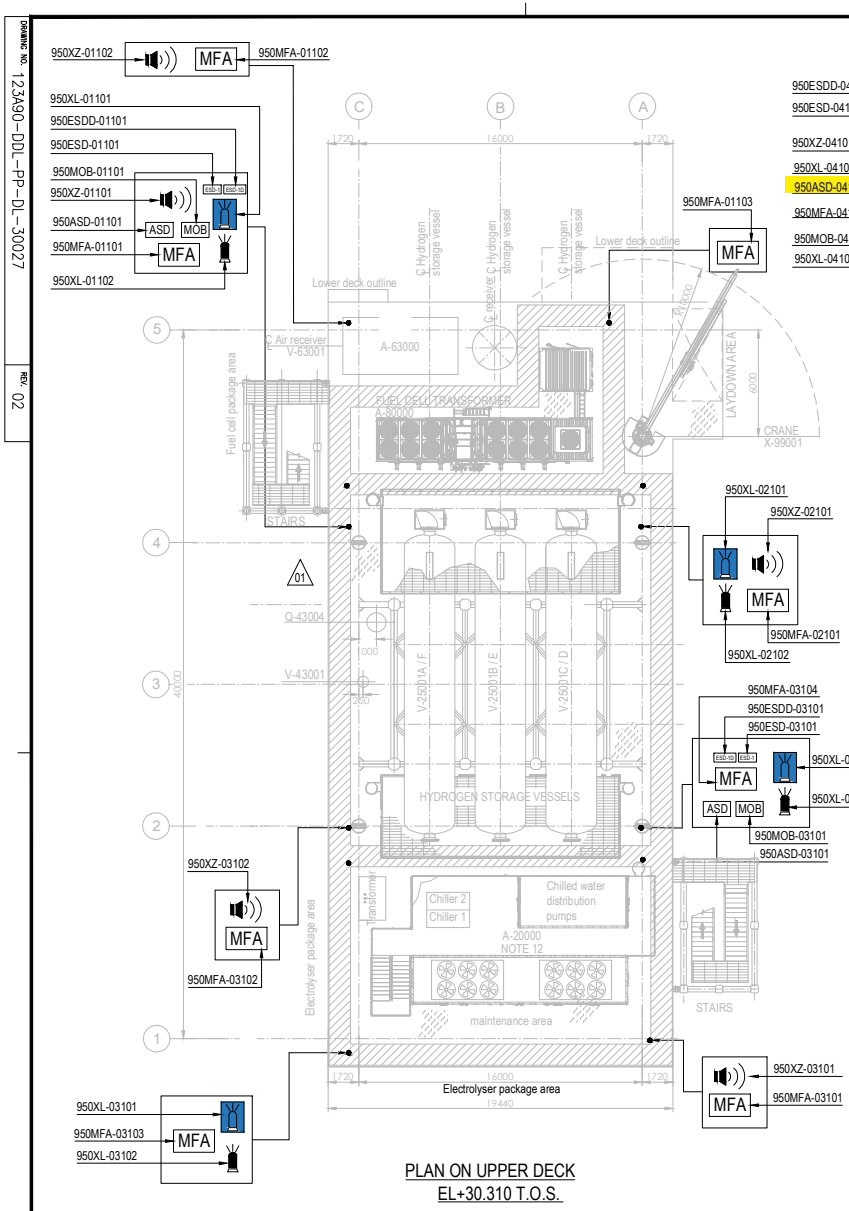
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments Nota 5: refer to PL C30000680/C30000682

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-30	2025-01-02	
Signature	Digitaly signed by Francesco Zucca 2024-12-30T14:52:03.584Z	Digitaly signed by Giovanni Tangianu 2025-01-02T15:48:45.467Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



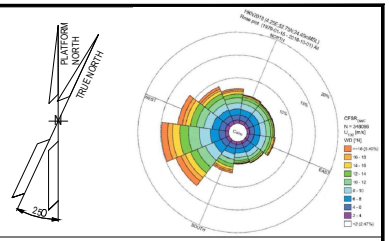
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30027**

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 :

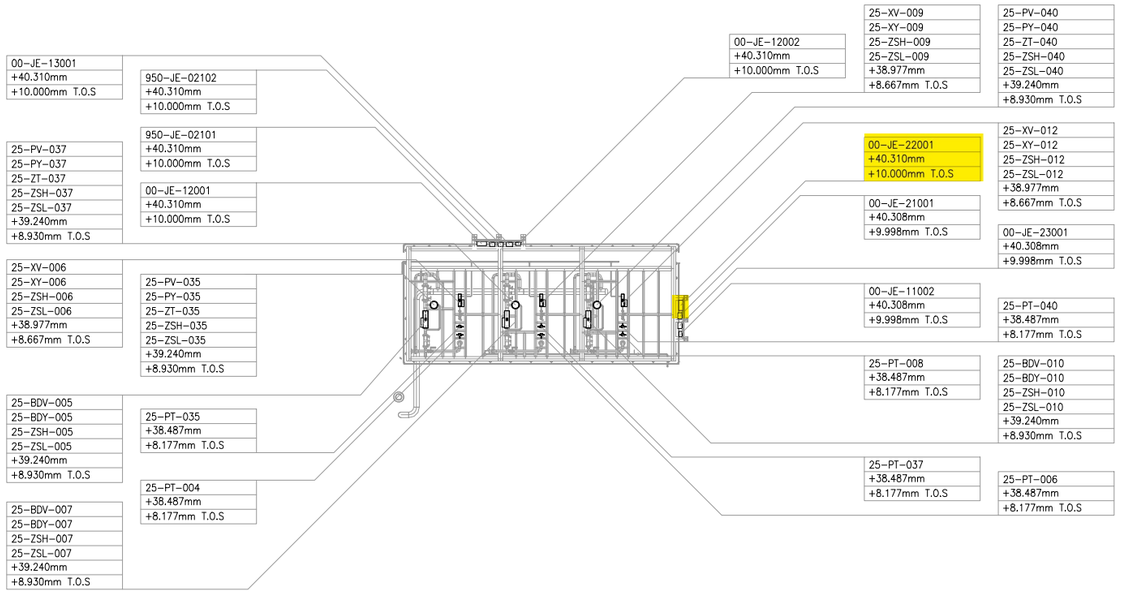
F & G DETECTORS LAYOUT - LOWER & UPPER DECK

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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

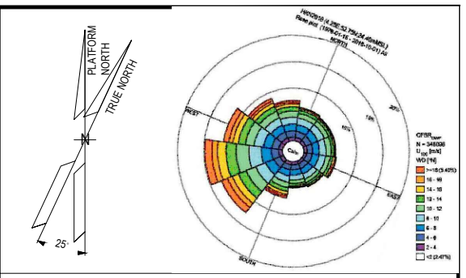
DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 36500mm to 47060mm



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

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

ROSETTI MARINO SpA

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

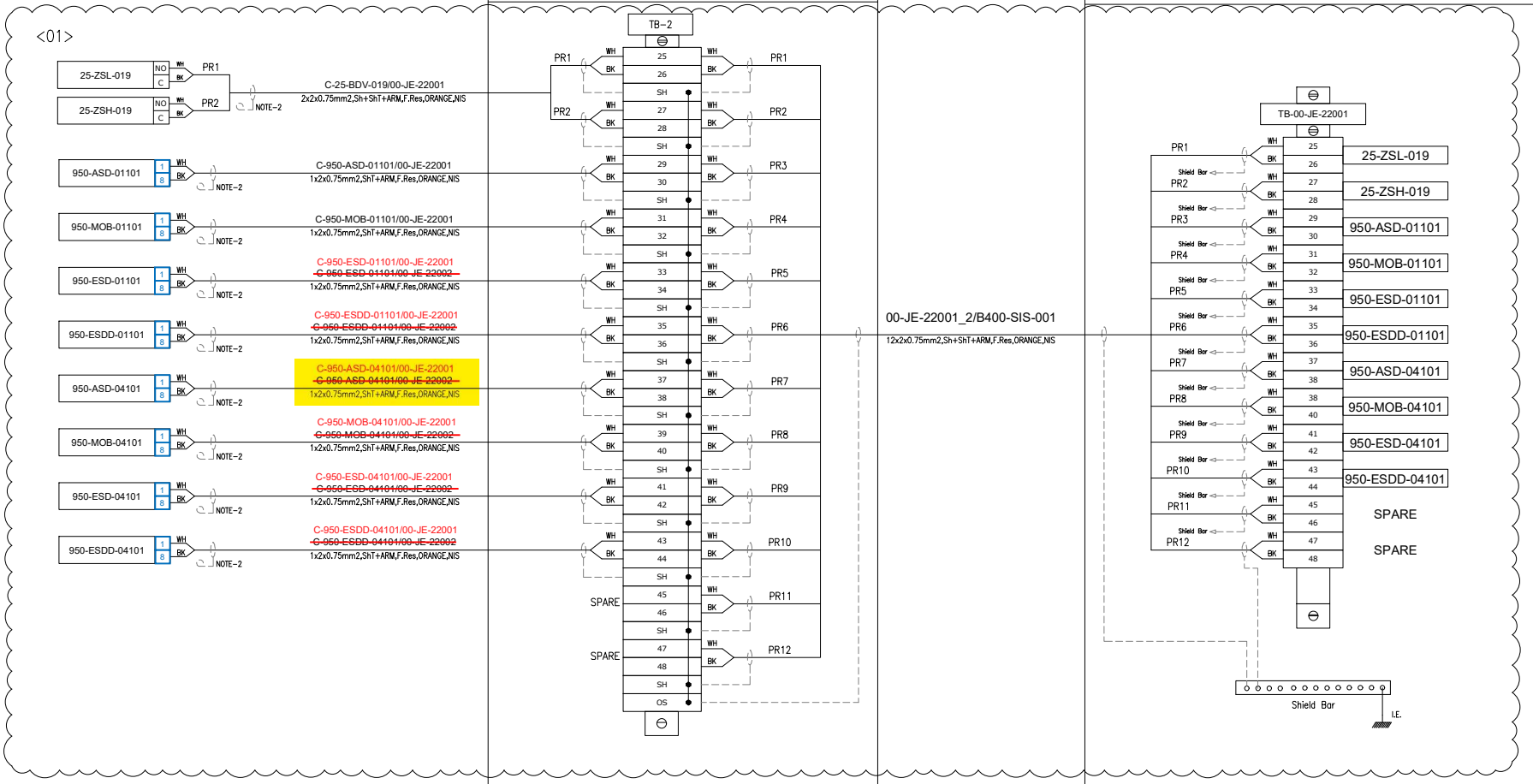
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40081	SHEET 003	REV. 02

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

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-22001	No.	MARSHALLING CABINET B400-SIS-001



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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

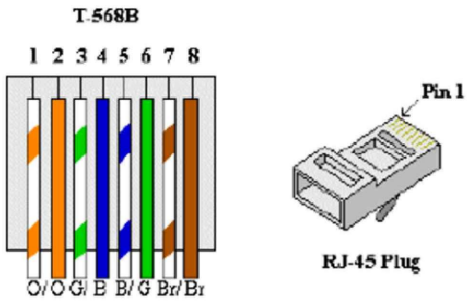
	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	011	01

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:

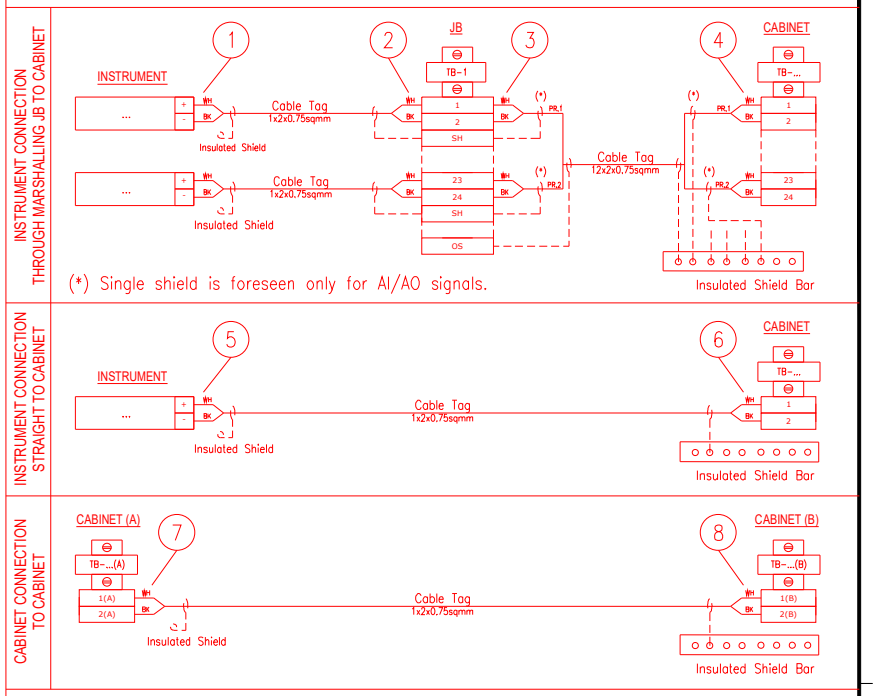


8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

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:



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

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

REFERENCE DRAWINGS:

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

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

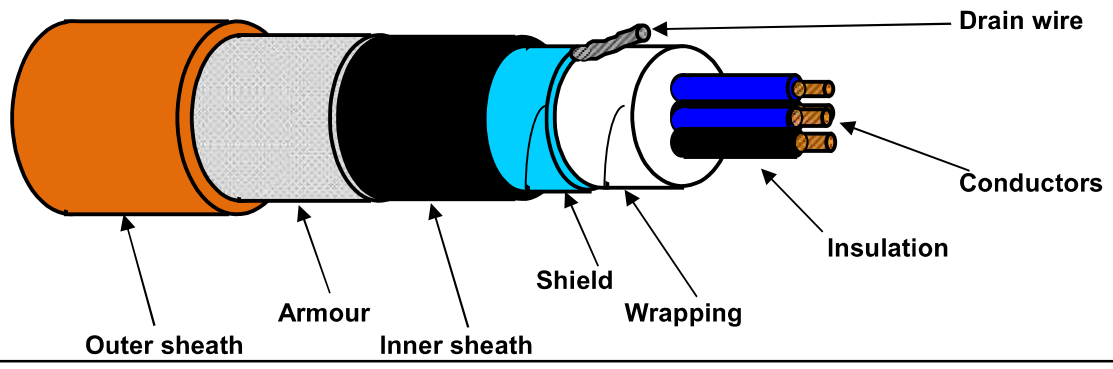
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

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 Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-950-ASD-04101/00-JE-22001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-ASD-04101	Push Button	Lower Deck	00-JE-22001	DI JB to SIS	Upper Deck	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-32 / L-SEC-2 / L-SEC-1B / L-SEC-1C / L-SEC-1D / L-SEC-6 / U-SEC-11 / U-SEC-2D / U-SEC-2C / U-SEC-2B / U-SEC-2A / U-SEC-1B / U-SEC-3

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.

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-950-MOB-04101/00-JE-22001 : PUSH BUTTON / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	79-13 : Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)			Module	LD/UD	
TASK	code	C10000151	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-MOB-04101	To	00-JE-22001		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	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		2,76	Ω
	SCREEN		2,76	Ω
	EARTH		NA	Ω
	ARMr		2,76	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

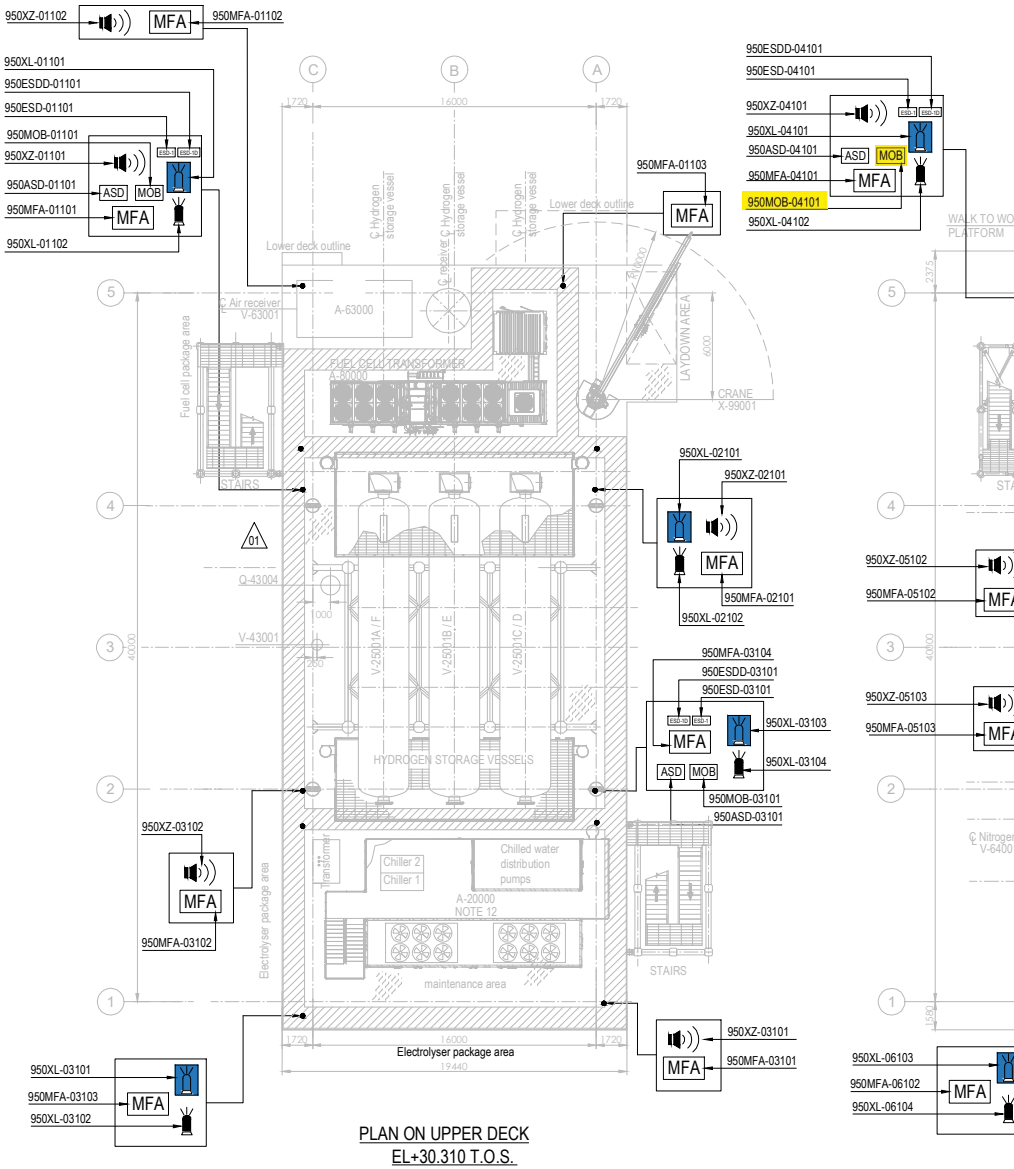
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments Nota 5: refer to PL C30000680/C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-30	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-30T14:52:17.876Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T17:00:30.106Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

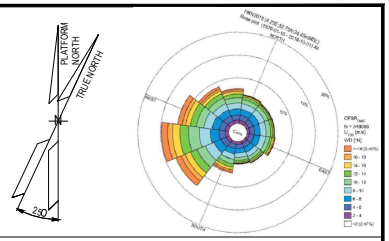
REV. 02



EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30027**

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 :

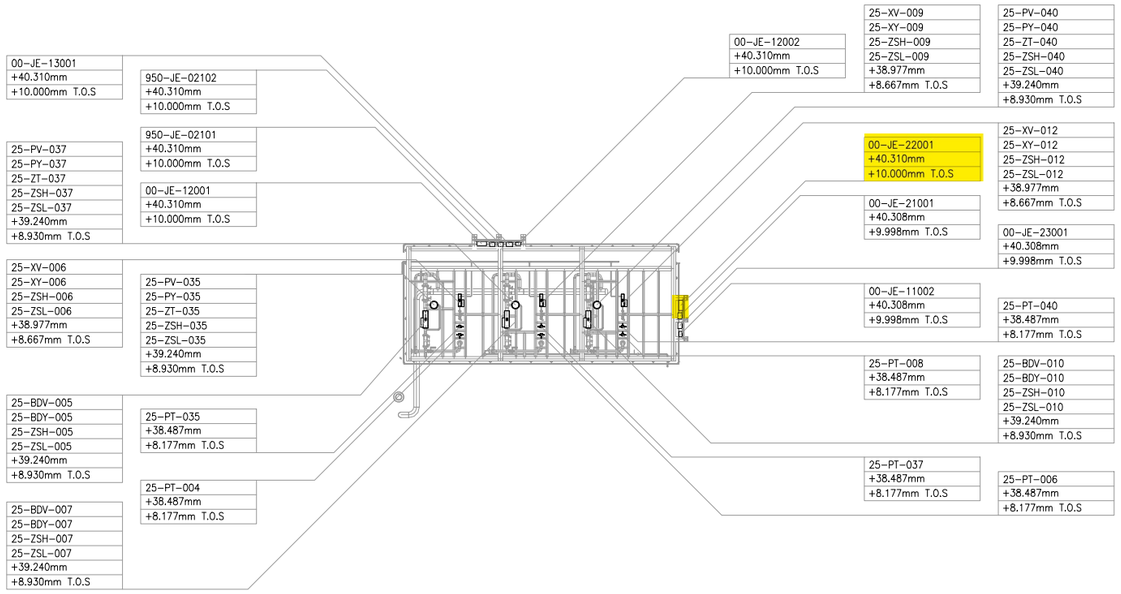
F & G DETECTORS LAYOUT - LOWER & UPPER DECK

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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

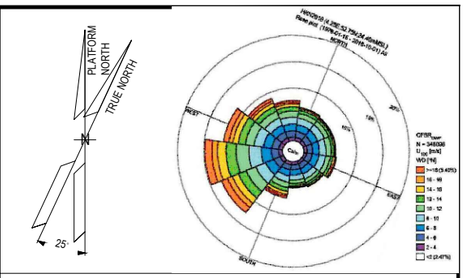
DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 36500mm to 47060mm



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

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

ROSETTI MARINO SpA

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

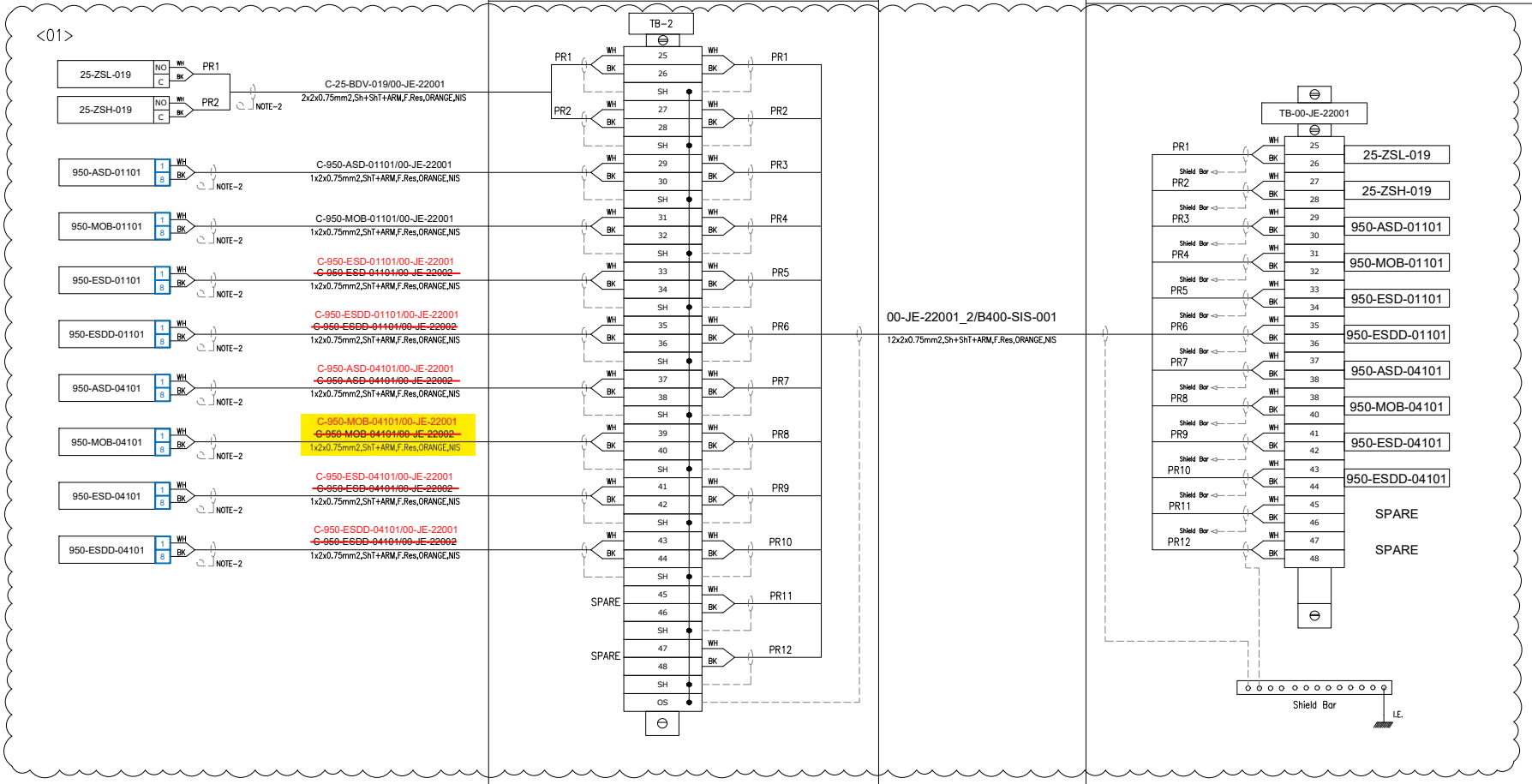
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40081	SHEET 003	REV. 02

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

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-22001	No.	MARSHALLING CABINET B400-SIS-001



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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

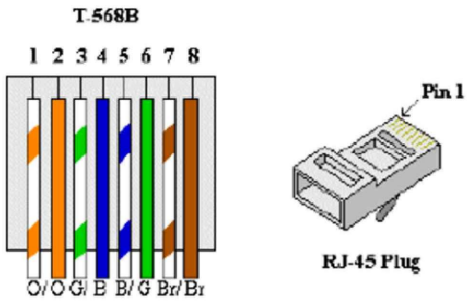
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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

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

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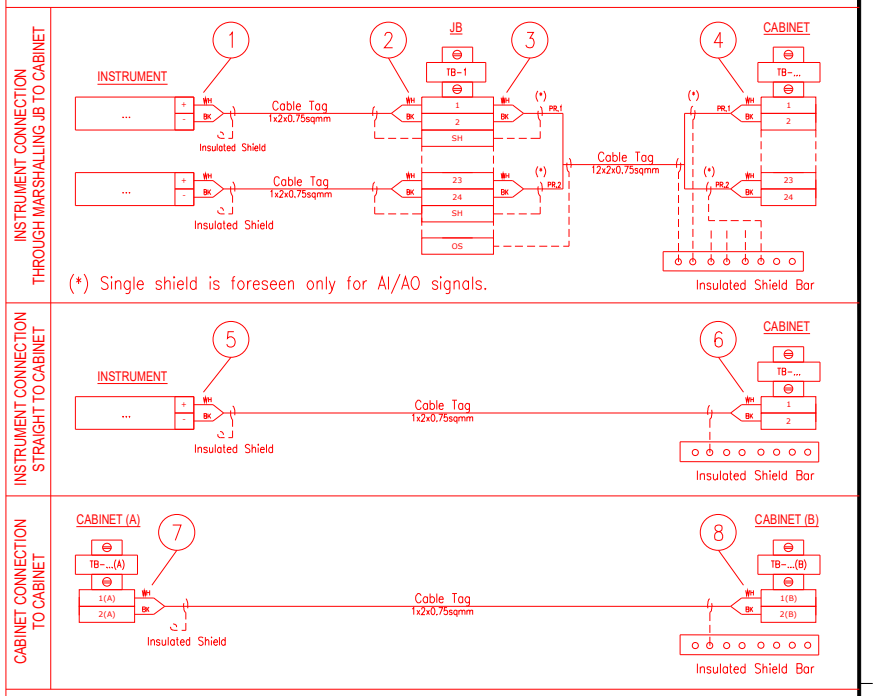


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PHILOSOPHY OF CROSS-FERRULING:



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

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

REFERENCE DRAWINGS:

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

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

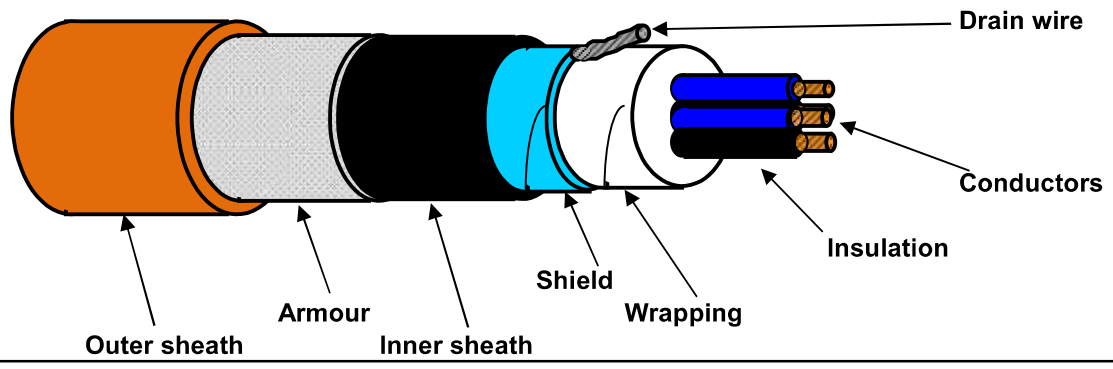
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

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 Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-950-MOB-04101/00-JE-22001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-MOB-04101	Push Button	Lower Deck	00-JE-22001	DI JB to SIS	Upper Deck	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-32 / L-SEC-2 / L-SEC-1B / L-SEC-1C / L-SEC-1D / L-SEC-6 / U-SEC-11 / U-SEC-2D / U-SEC-2C / U-SEC-2B / U-SEC-2A / U-SEC-1B / U-SEC-3

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.

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	C-950-ESD-04101/00-JE-22001 : PUSH BUTTON / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	79-13 : Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)				Module	LD/UD
TASK	code	C10000152		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-ESD-04101		To	00-JE-22001	

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	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.	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	2,78	Ω
	SCREEN	2,78	Ω
	EARTH	NA	Ω
	ARMr	2,78	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

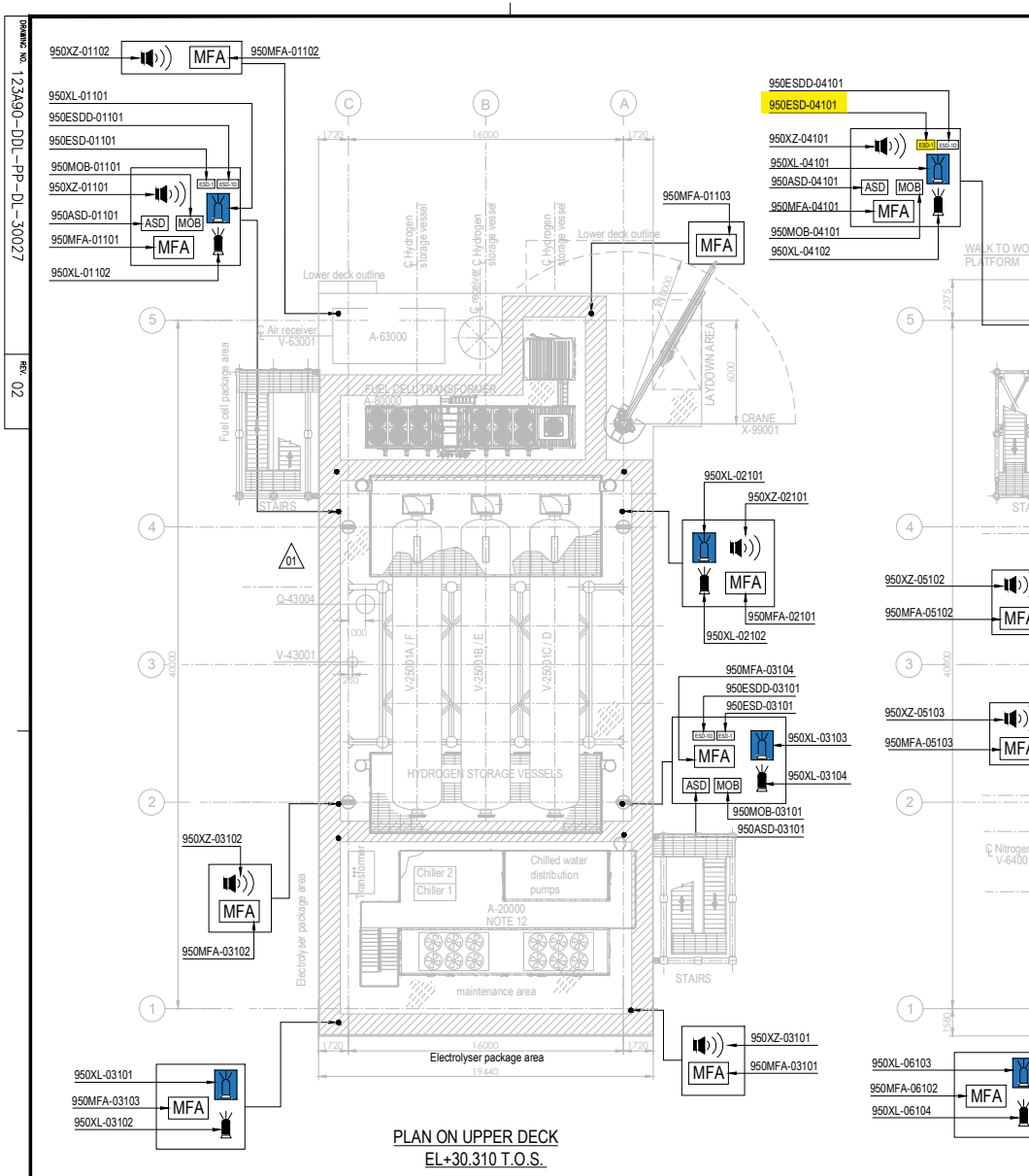
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments Nota 5: refer to PL C30000680/C30000682

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-30	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-30T14:52:32.518Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:47:40.827Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



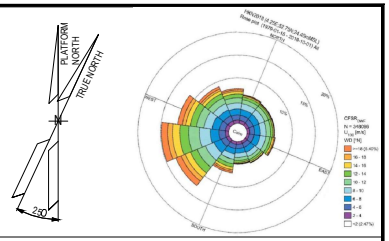
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-SAF-DL-30027

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 :

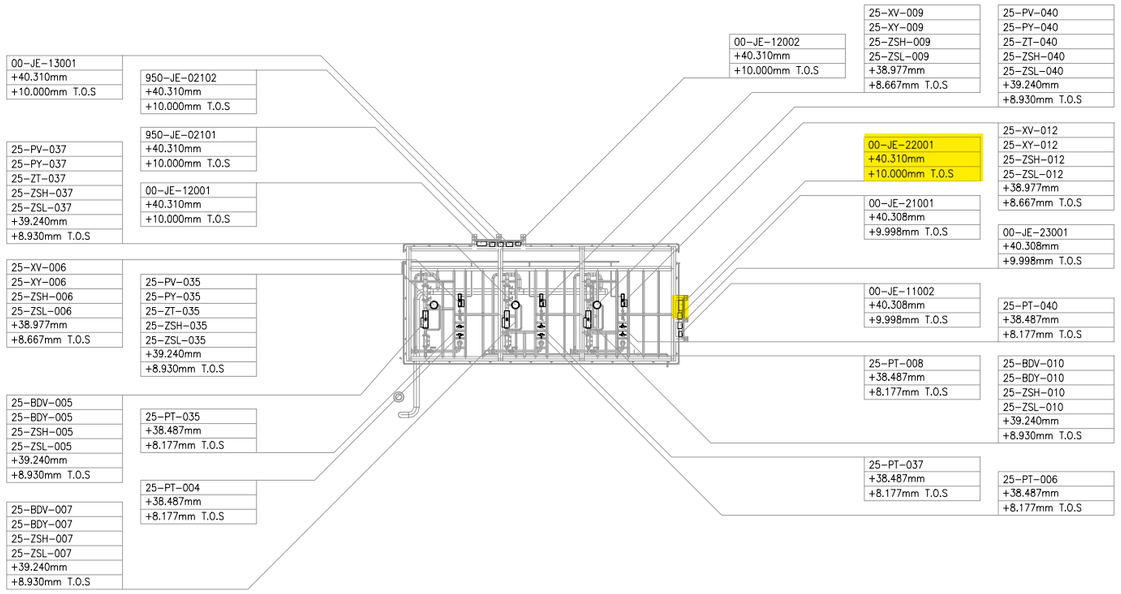
F & G DETECTORS LAYOUT - LOWER & UPPER DECK

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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

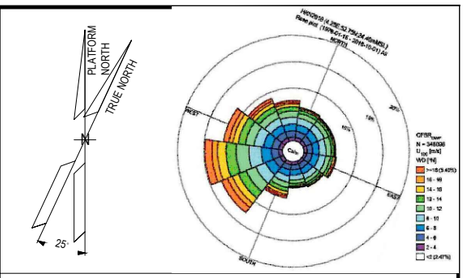
DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 36500mm to 47060mm



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

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

ROSETTI MARINO SpA

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

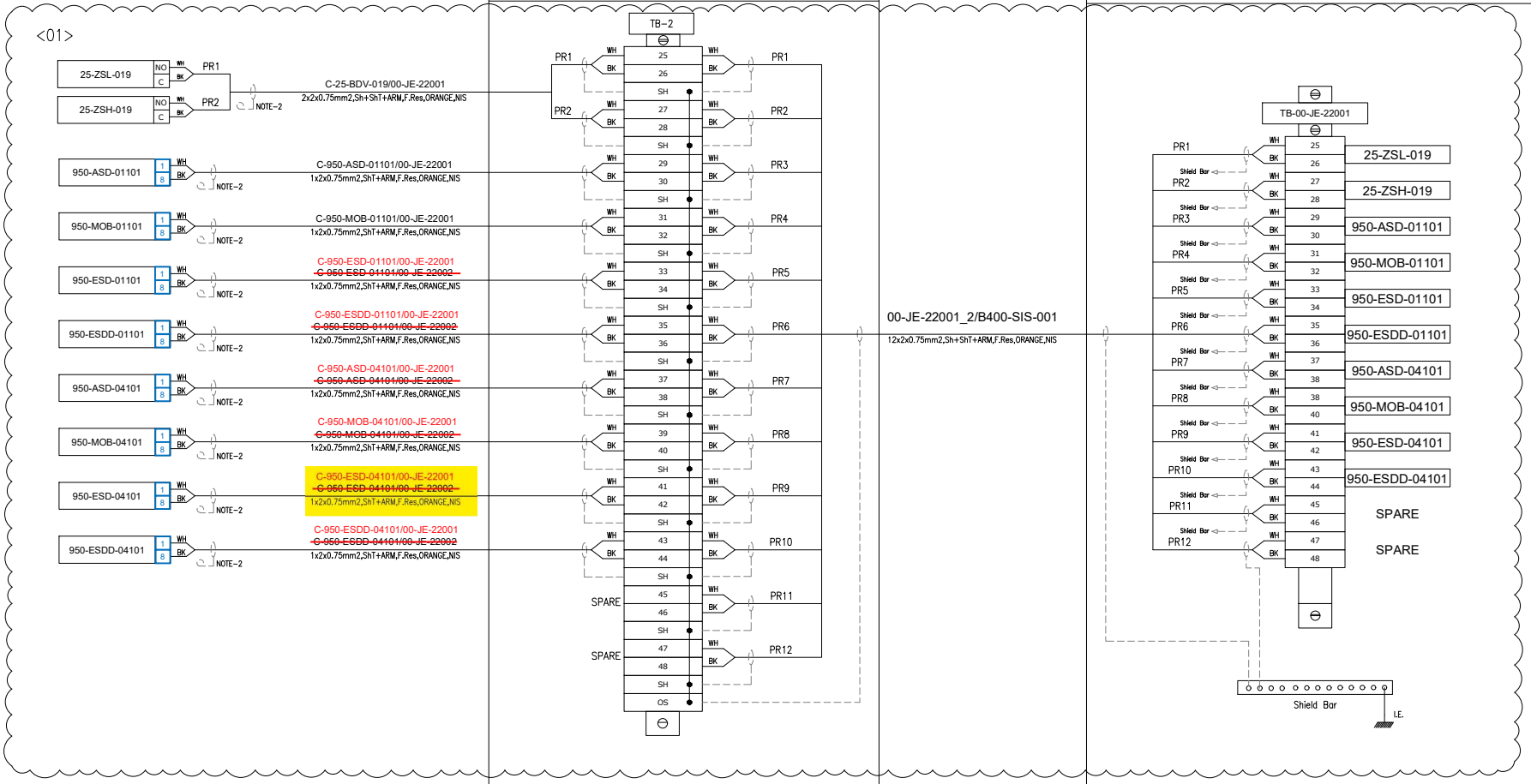
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40081	SHEET 003	REV. 02

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

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-22001	No.	MARSHALLING CABINET B400-SIS-001



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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

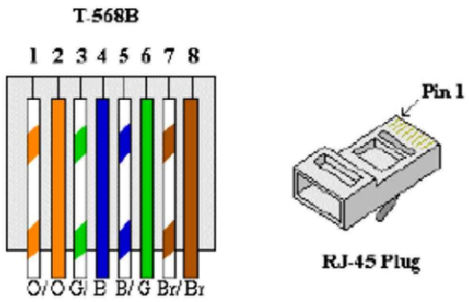
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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:

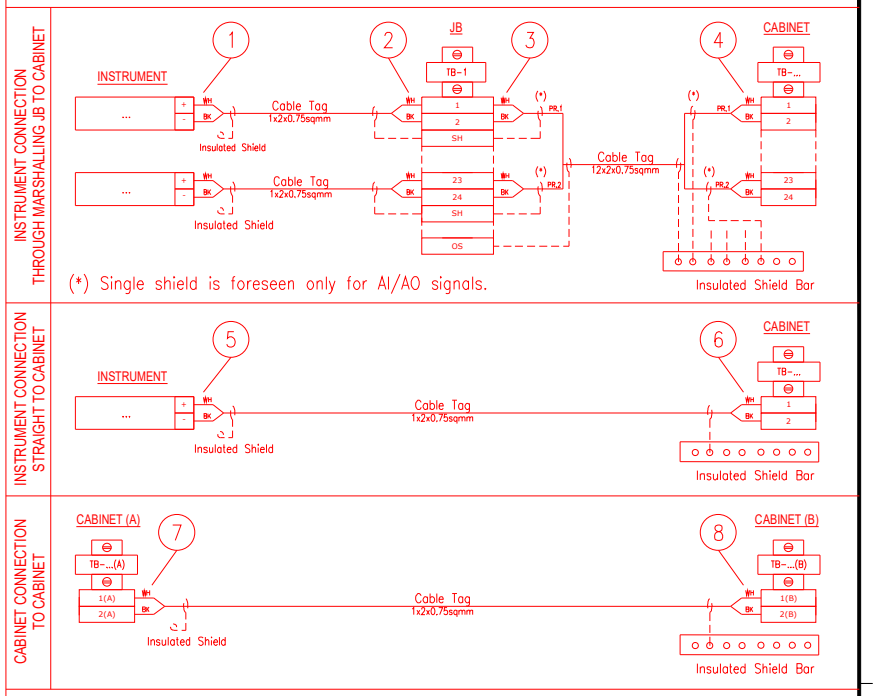


8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

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:



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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.
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REFERENCE DRAWINGS:

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

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

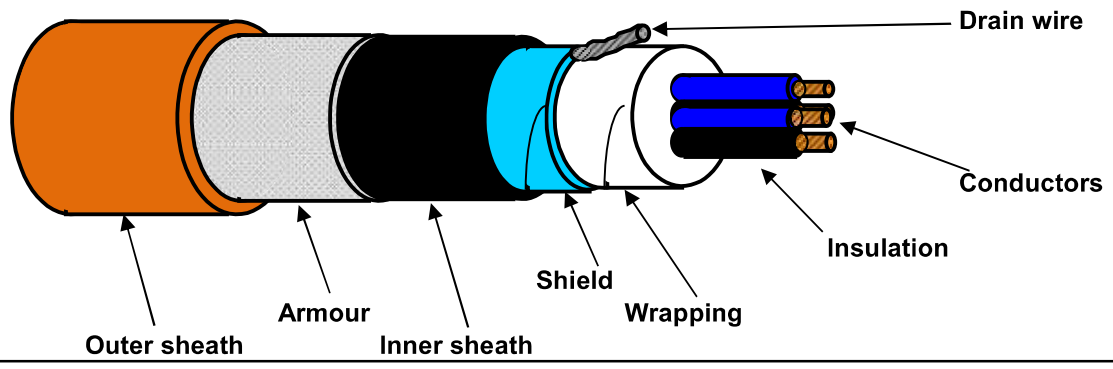
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

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 Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-950-ESD-04101/00-JE-22001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-ESD-04101	Push Button	Lower Deck	00-JE-22001	DI JB to SIS	Upper Deck	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-32 / L-SEC-2 / L-SEC-1B / L-SEC-1C / L-SEC-1D / L-SEC-6 / U-SEC-11 / U-SEC-2D / U-SEC-2C / U-SEC-2B / U-SEC-2A / U-SEC-1B / U-SEC-3

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.

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-950-ESDD-04101/00-JE-22001	:	PUSH BUTTON / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	79-13	:	Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)	Module	LD/UD	
TASK	code	C10000153	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-ESDD-04101	To	00-JE-22001		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	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.	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		2,75	Ω
	SCREEN		2,75	Ω
	EARTH		NA	Ω
	ARMr		2,75	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

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

TESTING INSTRUMENTS USED

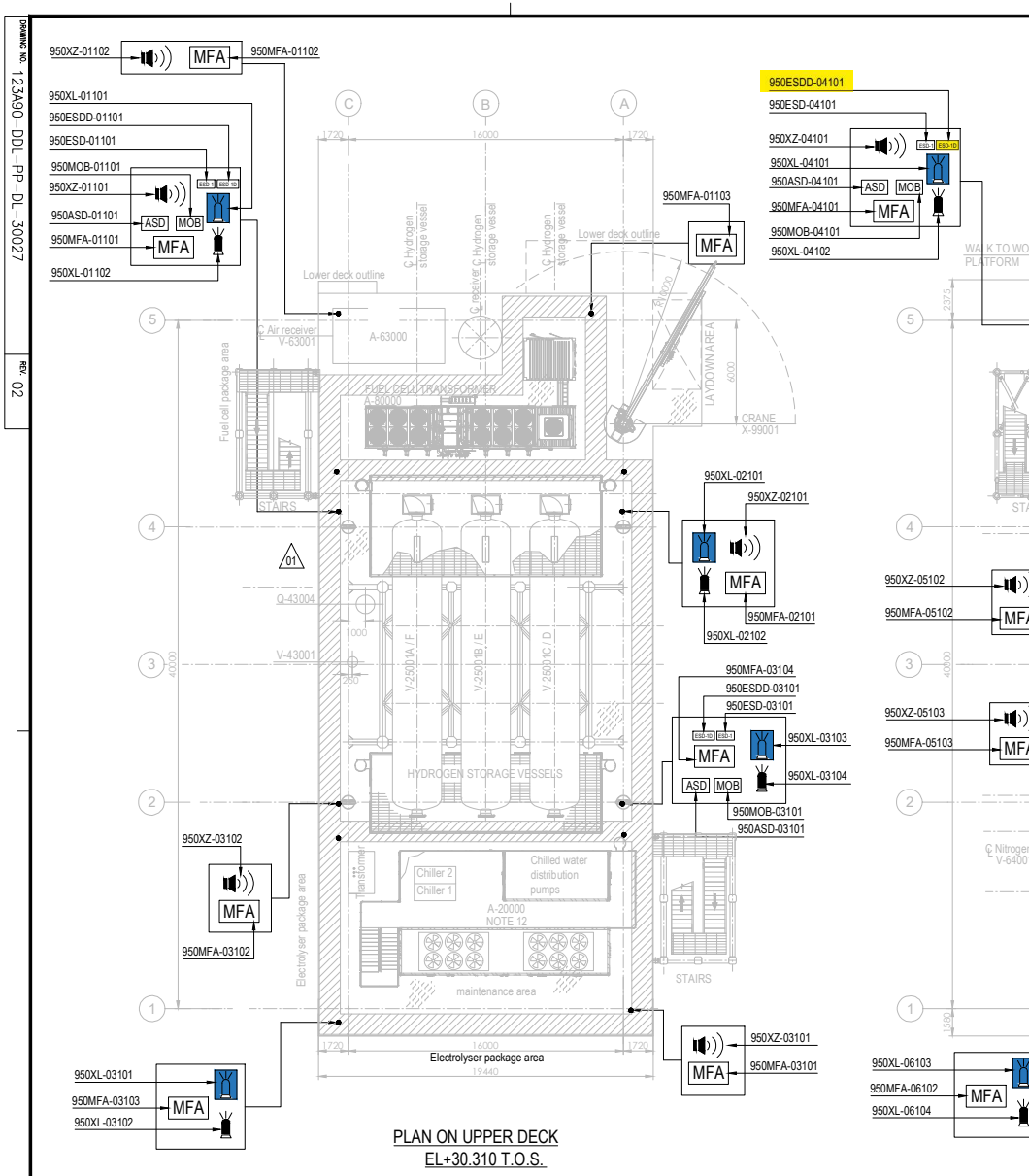
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 Calibration date: N° 7722/24 10/07/2024

Comments Nota 5: refer to PL C30000680/C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-30	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-30T14:52:49.148Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:58:22.671Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

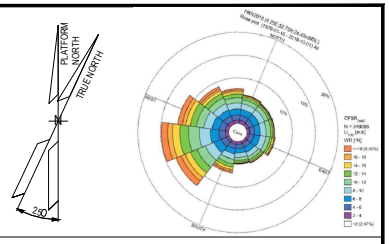
REV. 02



EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30027**

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 :

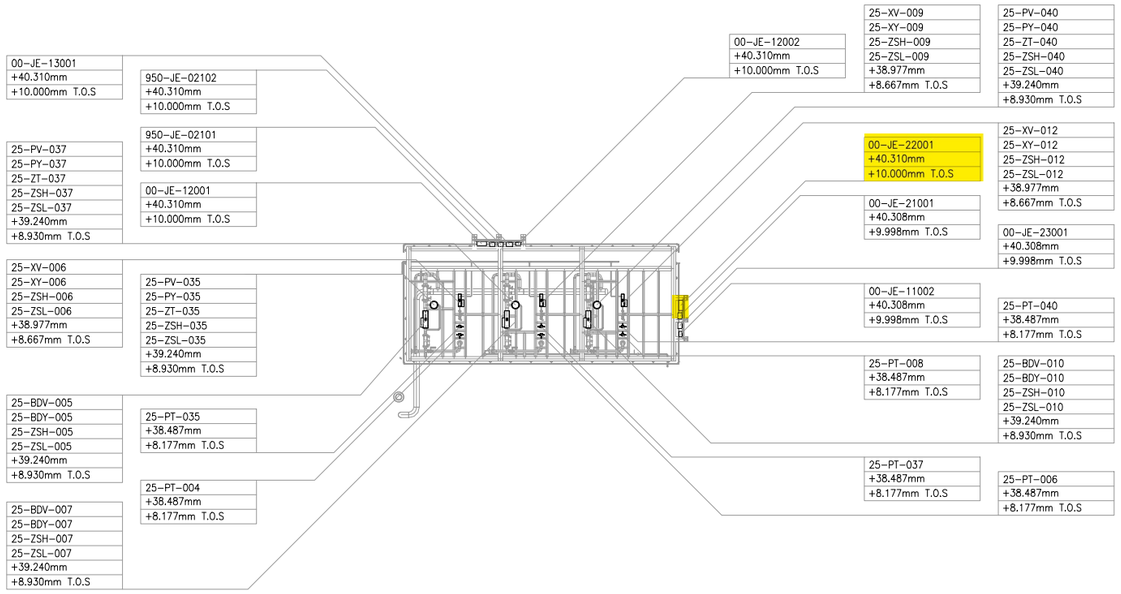
F & G DETECTORS LAYOUT - LOWER & UPPER DECK

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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

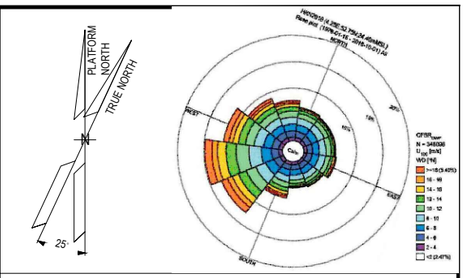
DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 02



UPPER DECK
SCALE: 1:100

VIEW EL. 36500mm to 47060mm



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40080	INSTRUMENT LAYOUT - LOWER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

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

ROSETTI MARINO SpA

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

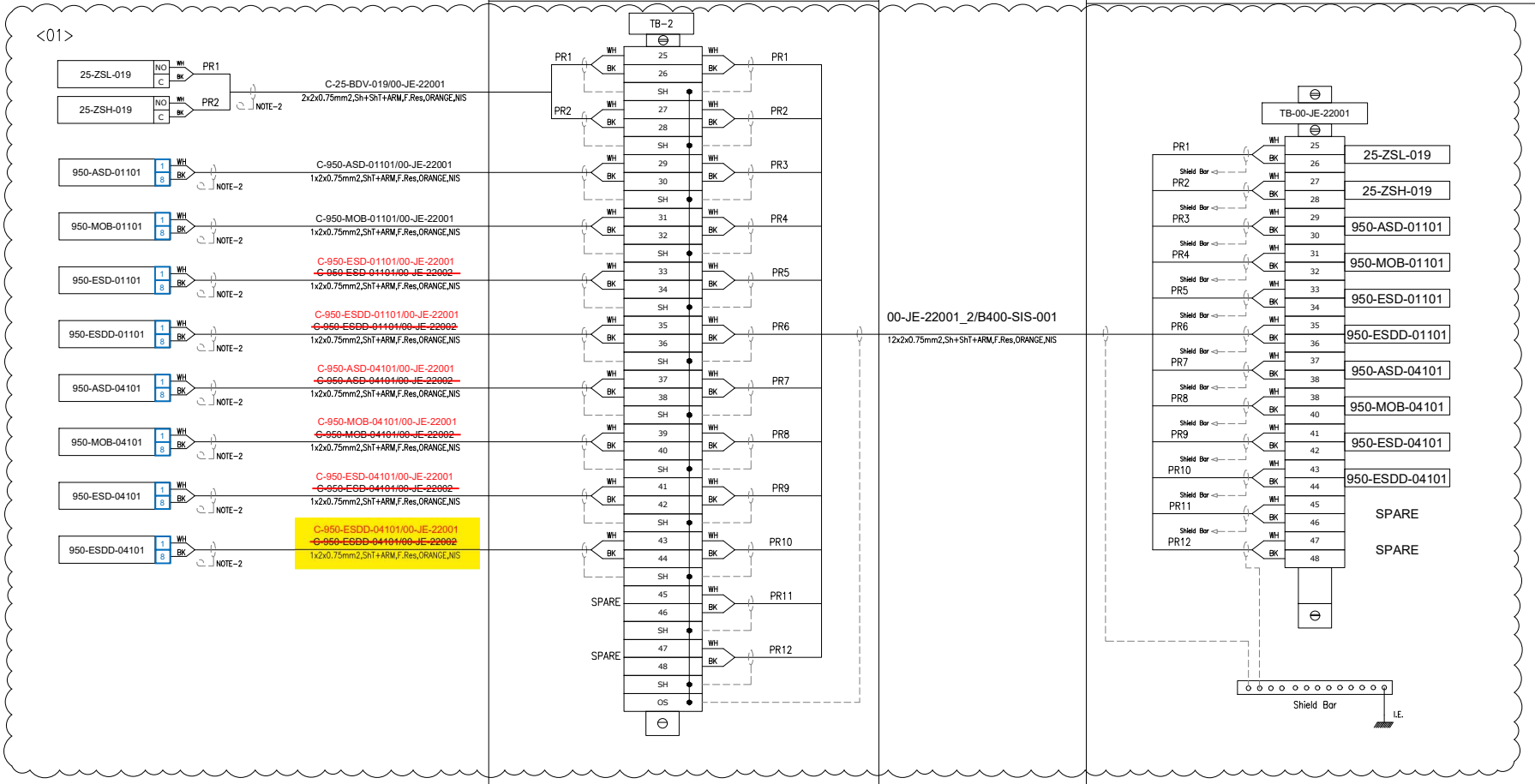
CONTRACT NO./TITLE CW-1-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40081	SHEET 003	REV. 02

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

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-22001	No.	MARSHALLING CABINET B400-SIS-001



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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

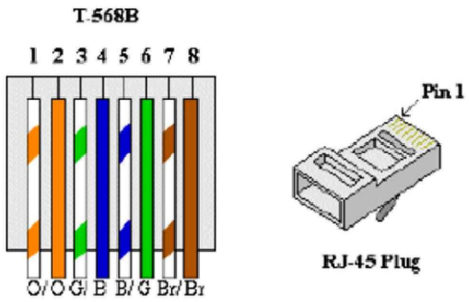
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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:

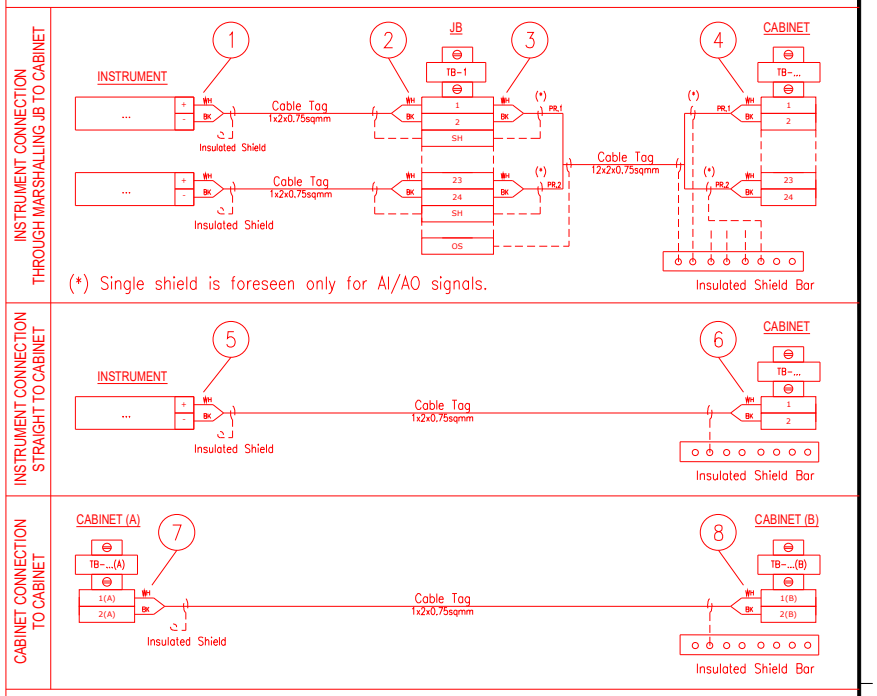


8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

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:



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

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

REFERENCE DRAWINGS:

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

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

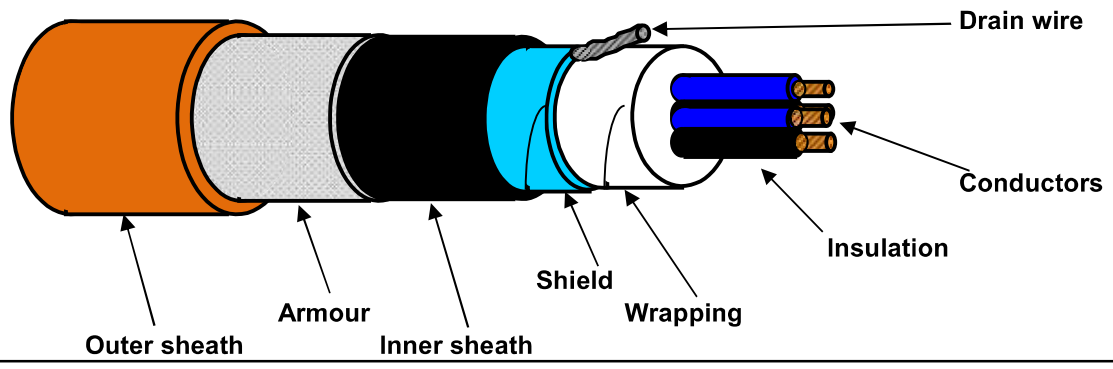
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

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 Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-950-ESDD-04101/00-JE-22001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						950-ESDD-04101	Push Button	Lower Deck	00-JE-22001	DI JB to SIS	Upper Deck	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-32 / L-SEC-2 / L-SEC-1B / L-SEC-1C / L-SEC-1D / L-SEC-6 / U-SEC-11 / U-SEC-2D / U-SEC-2C / U-SEC-2B / U-SEC-2A / U-SEC-1B / U-SEC-3

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-ASD-04101	: FZ-04 Abandon Shutdown Activation		Dwg	123A90-DDL-SAF-DL-30027	
	S/Sys	79-13	: Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)		Module	LD	
TASK	code	C10000956		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00	Miscellaneous

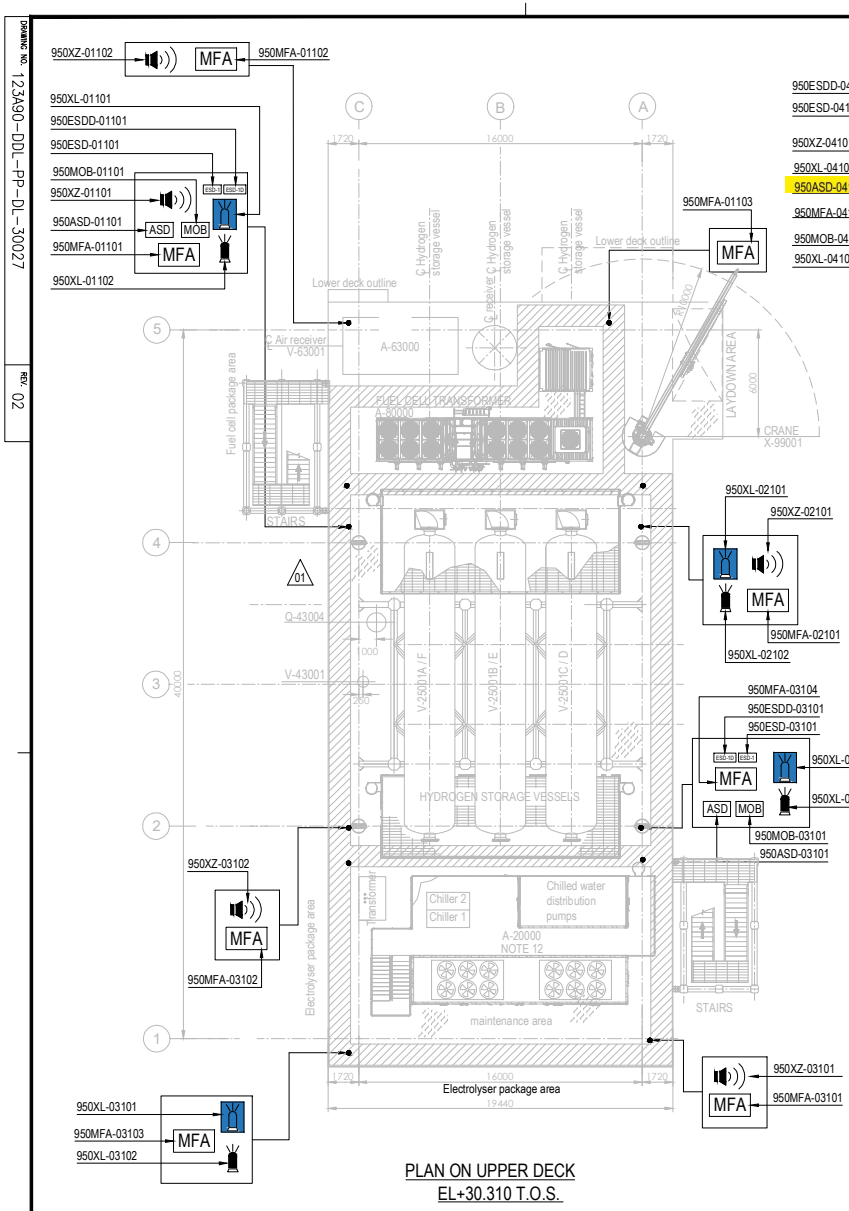
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (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.	PL
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	PL
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-03	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:03:00.400Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:22:33.263Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



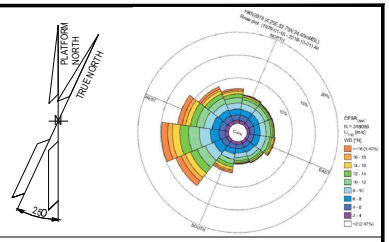
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30027**

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 - LOWER & UPPER 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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

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

REV. 01

FIELD

INSTRUMENTS

JUNCTION BOX

00-JE-22001

MULTICABLE

No.

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-SIS-001

<01>

25-ZSL-019 (NO/C) WH/BK PR1

25-ZSH-019 (NO/C) WH/BK PR2

NOTE-2

C-25-BDV-019/00-JE-22001
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

950-ASD-01101 (1/8) WH/BK — NOTE-2 — C-950-ASD-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-01101 (1/8) WH/BK — NOTE-2 — C-950-MOB-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-01101 (1/8) WH/BK — NOTE-2 — C-950-ESD-01101/00-JE-22001
~~C-950-ESD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-01101 (1/8) WH/BK — NOTE-2 — C-950-ESDD-01101/00-JE-22001
~~C-950-ESDD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ASD-04101 (1/8) WH/BK — NOTE-2 — C-950-ASD-04101/00-JE-22001
~~C-950-ASD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-04101 (1/8) WH/BK — NOTE-2 — C-950-MOB-04101/00-JE-22001
~~C-950-MOB-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-04101 (1/8) WH/BK — NOTE-2 — C-950-ESD-04101/00-JE-22001
~~C-950-ESD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-04101 (1/8) WH/BK — NOTE-2 — C-950-ESDD-04101/00-JE-22001
~~C-950-ESDD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-2

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

00-JE-22001_2/B400-SIS-001
12x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-22001

PR1	25	25-ZSL-019
	26	
PR2	27	25-ZSH-019
	28	
PR3	29	950-ASD-01101
	30	
PR4	31	950-MOB-01101
	32	
PR5	33	950-ESD-01101
	34	
PR6	35	950-ESDD-01101
	36	
PR7	37	950-ASD-04101
	38	
PR8	38	950-MOB-04101
	40	
PR9	41	950-ESD-04101
	42	
PR10	43	950-ESDD-04101
	44	
PR11	45	SPARE
	46	
PR12	47	SPARE
	48	

Shield Bar — I.E.

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

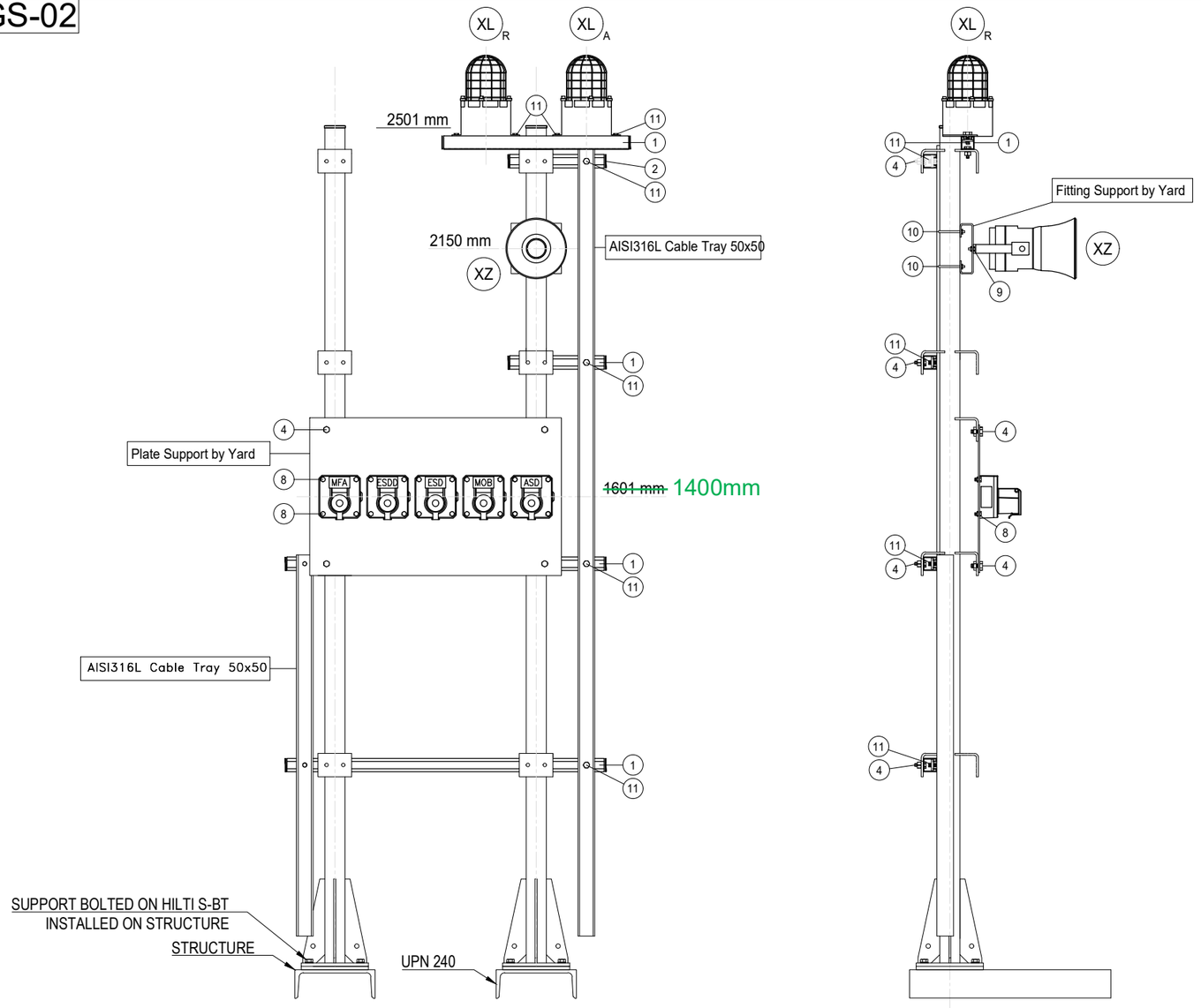
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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

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

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

ROSETTI MARINO SpA

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

CROSSWIND

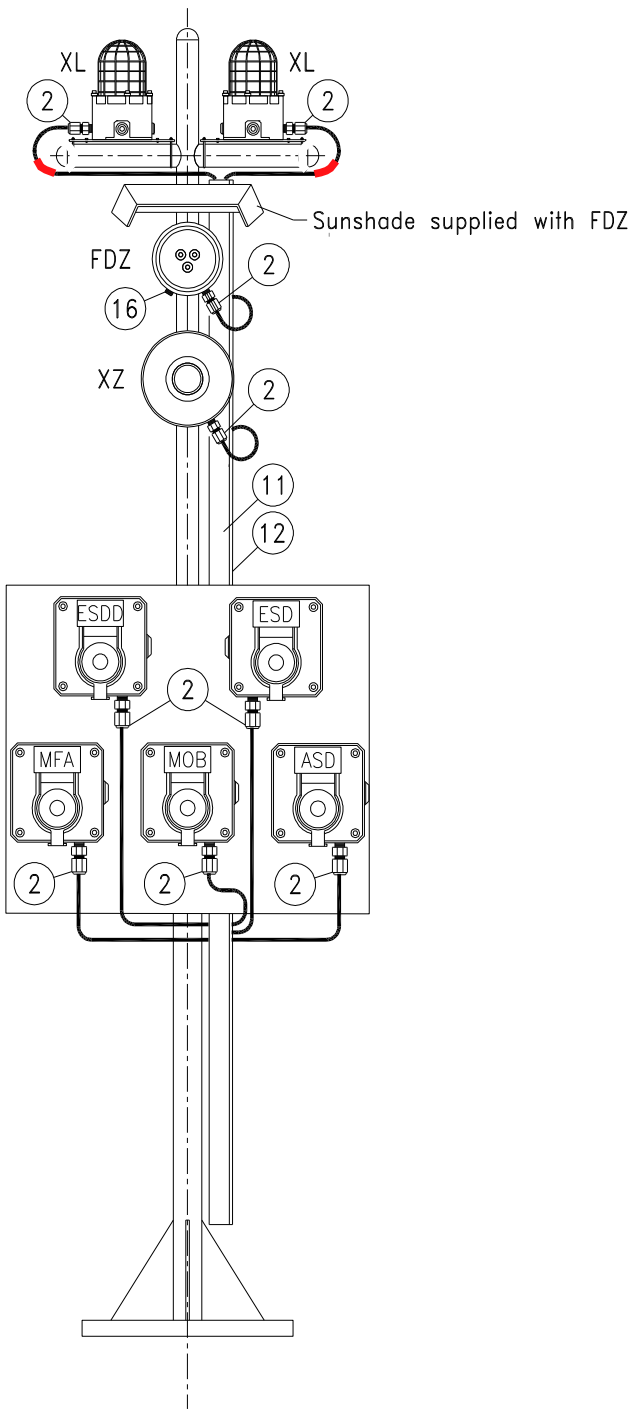
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
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

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	~~950-FDZ-04101~~
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-06101 (AMBER)
	950-XL-06102 (RED)
	~~950-FDZ-06101~~
	950-XZ-06101
	950-ESDD-06101
	950-ESD-06101
	950-MFA-06101
	950-MOB-06101
	950-ASD-06101
3	950-XL-01101 950-XL-01102 950-FDZ-01101 950-FDZ-02101 950-XZ-01101 950-ESDD-01101 950-ESD-01101 950-MOB-01101 950-ASD-01101 950-MFA-01101

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
16		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	9

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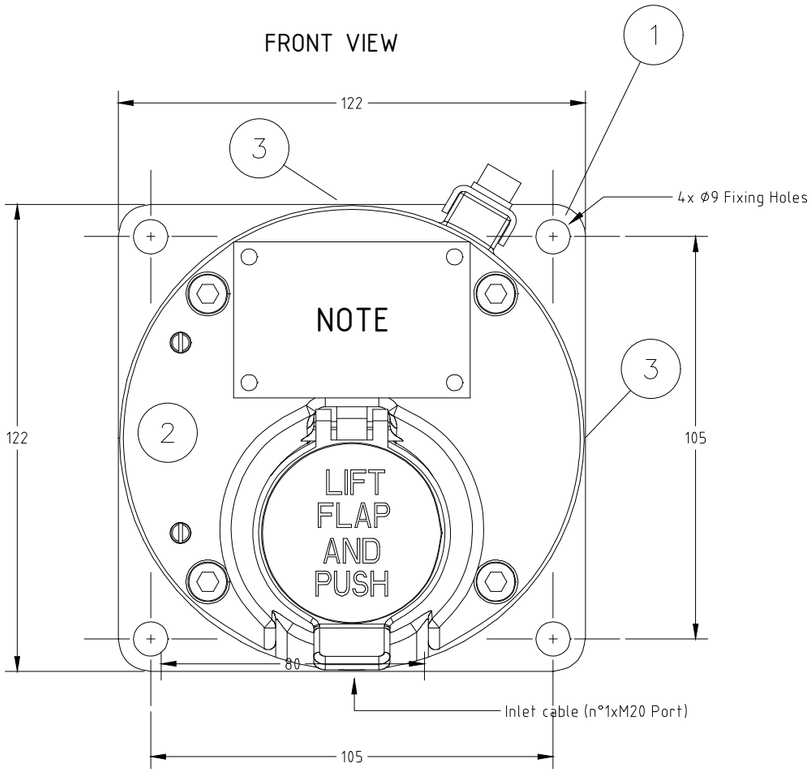
MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW)

ITEM	DESCRIPTIONS	NR
1	Manual Call Point (Push Button) (Yellow), MEDC SM87PBLSD1B1ROYHDYZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

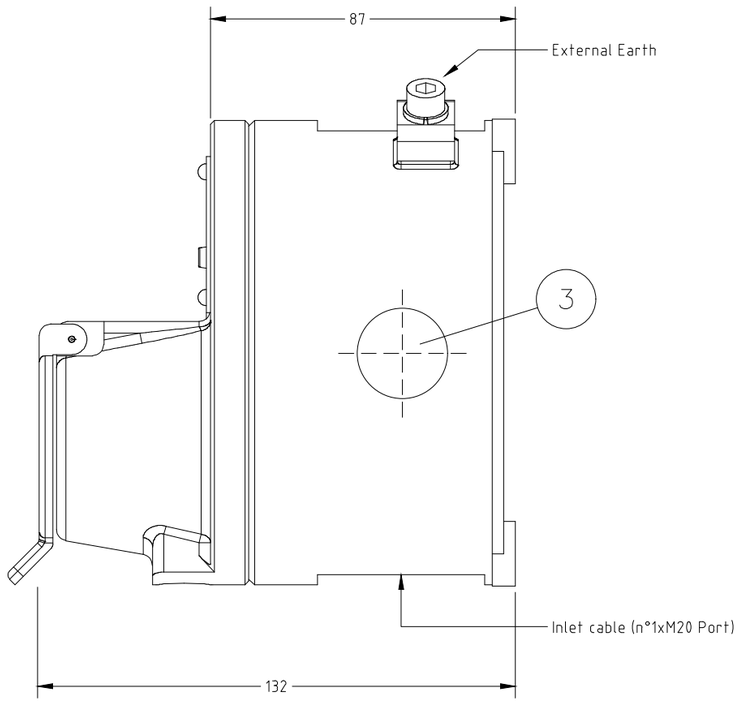
INSTALLATION QUANTITY

20

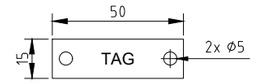
FRONT VIEW



SIDE VIEW



2 STAINLESS STEEL NAME PLATE DETAILS

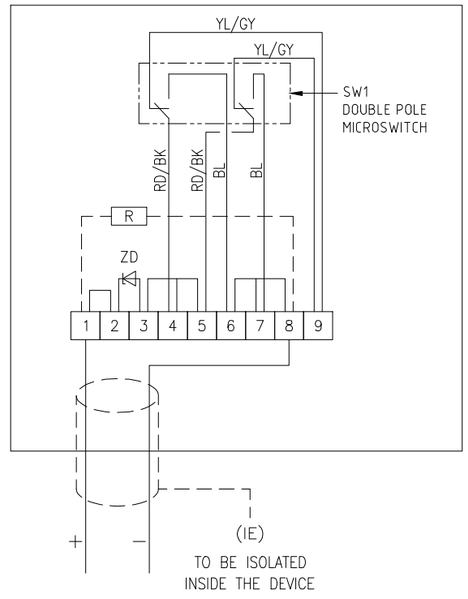


NOTE 5

WIRING

TERMINAL STRIP

ZD= ZENER 1N5339B 5.6V
R= 36 KOhm



NOTE

Q.TY	DUTY LABEL
5	ABANDON ACTIVATION
5	MAN OVER BOARD ACTIVATION
5	EMERGENCY SHUTDOWN ACTIVATION
5	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW) – TAG

POS.	TAG NUMBER
1	950-ASD-01101
2	950-ASD-03101
3	950-ASD-04101
4	950-ASD-06101
5	950-ASD-07101
6	950-MOB-01101
7	950-MOB-03101
8	950-MOB-04101
9	950-MOB-06101
10	950-MOB-07101
11	950-ESD-01101
12	950-ESD-03101
13	950-ESD-04101
14	950-ESD-06101
15	950-ESD-07101
16	950-ESDD-01101
17	950-ESDD-03101
18	950-ESDD-04101
19	950-ESDD-06101
20	950-ESDD-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW) – TAG

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 018 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

PUSH BUTTON TO SIS

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-ASD-01101	FZ-01 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
2	950-ASD-03101	FZ-03 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
3	950-ASD-04101	FZ-04 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
4	950-ASD-06101	FZ-06 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
5	950-ASD-07101	FZ-07 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
6	950-MOB-01101	FZ-01 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
7	950-MOB-03101	FZ-03 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
8	950-MOB-04101	FZ-04 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
9	950-MOB-06101	FZ-06 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
10	950-MOB-07101	FZ-07 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
11	950-ESD-01101	FZ-01 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
12	950-ESD-03101	FZ-03 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
13	950-ESD-04101	FZ-04 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
14	950-ESD-06101	FZ-06 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
15	950-ESD-07101	FZ-07 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
16	950-ESDD-01101	FZ-01 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
17	950-ESDD-03101	FZ-03 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
18	950-ESDD-04101	FZ-04 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
19	950-ESDD-06101	FZ-06 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
20	950-ESDD-07101	FZ-07 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION 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

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

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March 2024

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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

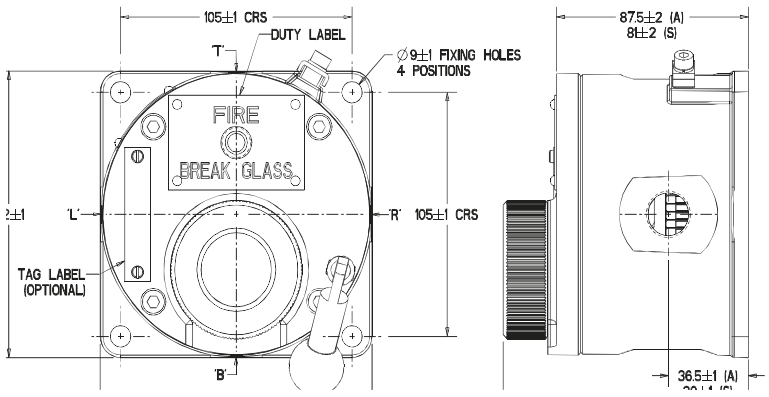
ATEX Ex d	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C 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

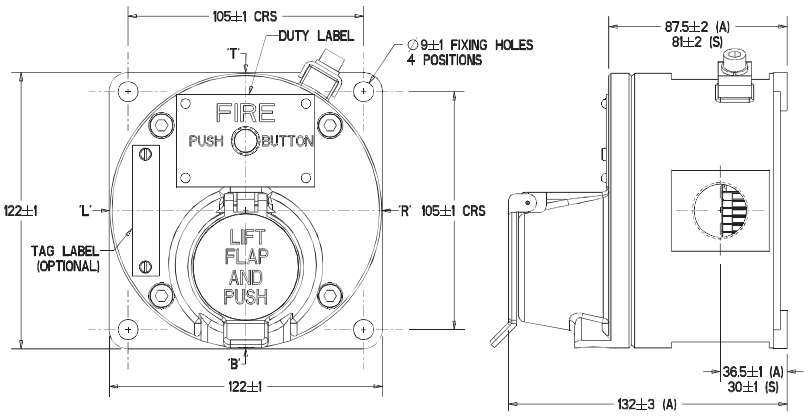
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high 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	Y

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-ESD-04101	: FZ-04 ESD-1 Push Button Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	79-13	: Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)			Module	LD
TASK	code	C10000961		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

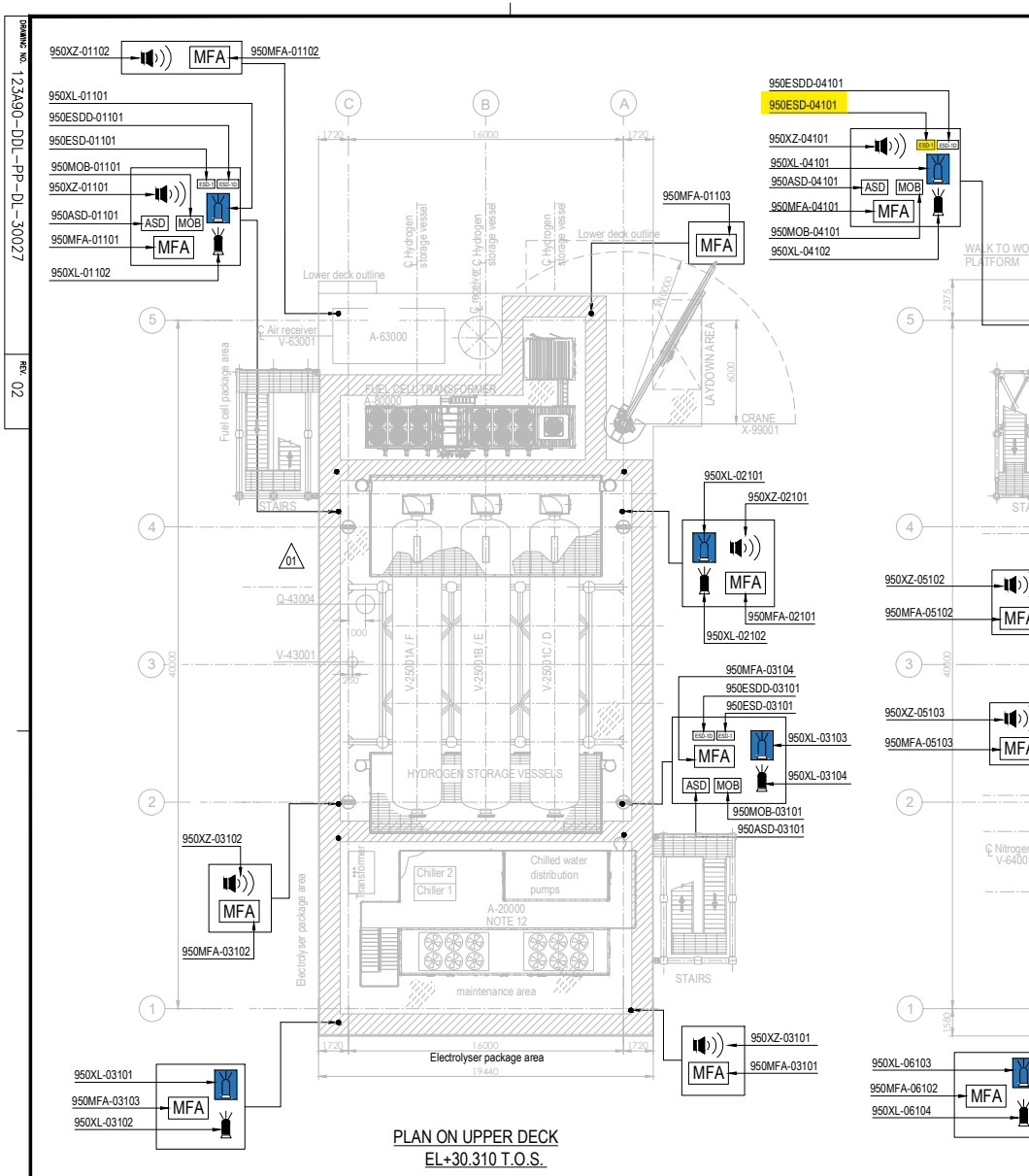
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (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.	PL
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)	PL
10	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-07	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-07T07:54:31.525Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:30:21.360Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



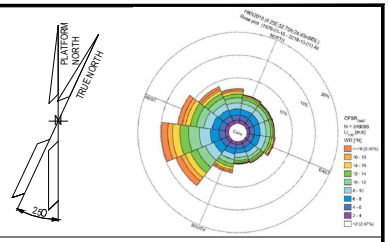
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-SAF-DL-30027**

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 - LOWER & UPPER 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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

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

REV. 01

FIELD

INSTRUMENTS

JUNCTION BOX

00-JE-22001

MULTICABLE

No.

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-SIS-001

<01>

25-ZSL-019 (NO/C) WH/BK PR1

25-ZSH-019 (NO/C) WH/BK PR2

NOTE-2

C-25-BDV-019/00-JE-22001
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

950-ASD-01101 (1/8) WH/BK NOTE-2
C-950-ASD-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-01101 (1/8) WH/BK NOTE-2
C-950-MOB-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-01101 (1/8) WH/BK NOTE-2
C-950-ESD-01101/00-JE-22001
~~C-950-ESD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-01101 (1/8) WH/BK NOTE-2
C-950-ESDD-01101/00-JE-22001
~~C-950-ESDD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ASD-04101 (1/8) WH/BK NOTE-2
C-950-ASD-04101/00-JE-22001
~~C-950-ASD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-04101 (1/8) WH/BK NOTE-2
C-950-MOB-04101/00-JE-22001
~~C-950-MOB-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-04101 (1/8) WH/BK NOTE-2
C-950-ESD-04101/00-JE-22001
~~C-950-ESD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-04101 (1/8) WH/BK NOTE-2
C-950-ESDD-04101/00-JE-22001
~~C-950-ESDD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-2

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

00-JE-22001_2/B400-SIS-001
12x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-22001

PR1	25	25-ZSL-019
Shield Bar	26	
PR2	27	25-ZSH-019
Shield Bar	28	
PR3	29	950-ASD-01101
Shield Bar	30	
PR4	31	950-MOB-01101
Shield Bar	32	
PR5	33	950-ESD-01101
Shield Bar	34	
PR6	35	950-ESDD-01101
Shield Bar	36	
PR7	37	950-ASD-04101
Shield Bar	38	
PR8	38	950-MOB-04101
Shield Bar	40	
PR9	41	950-ESD-04101
Shield Bar	42	
PR10	43	950-ESDD-04101
Shield Bar	44	
PR11	45	SPARE
Shield Bar	46	
PR12	47	SPARE
Shield Bar	48	

Shield Bar — I.E.

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

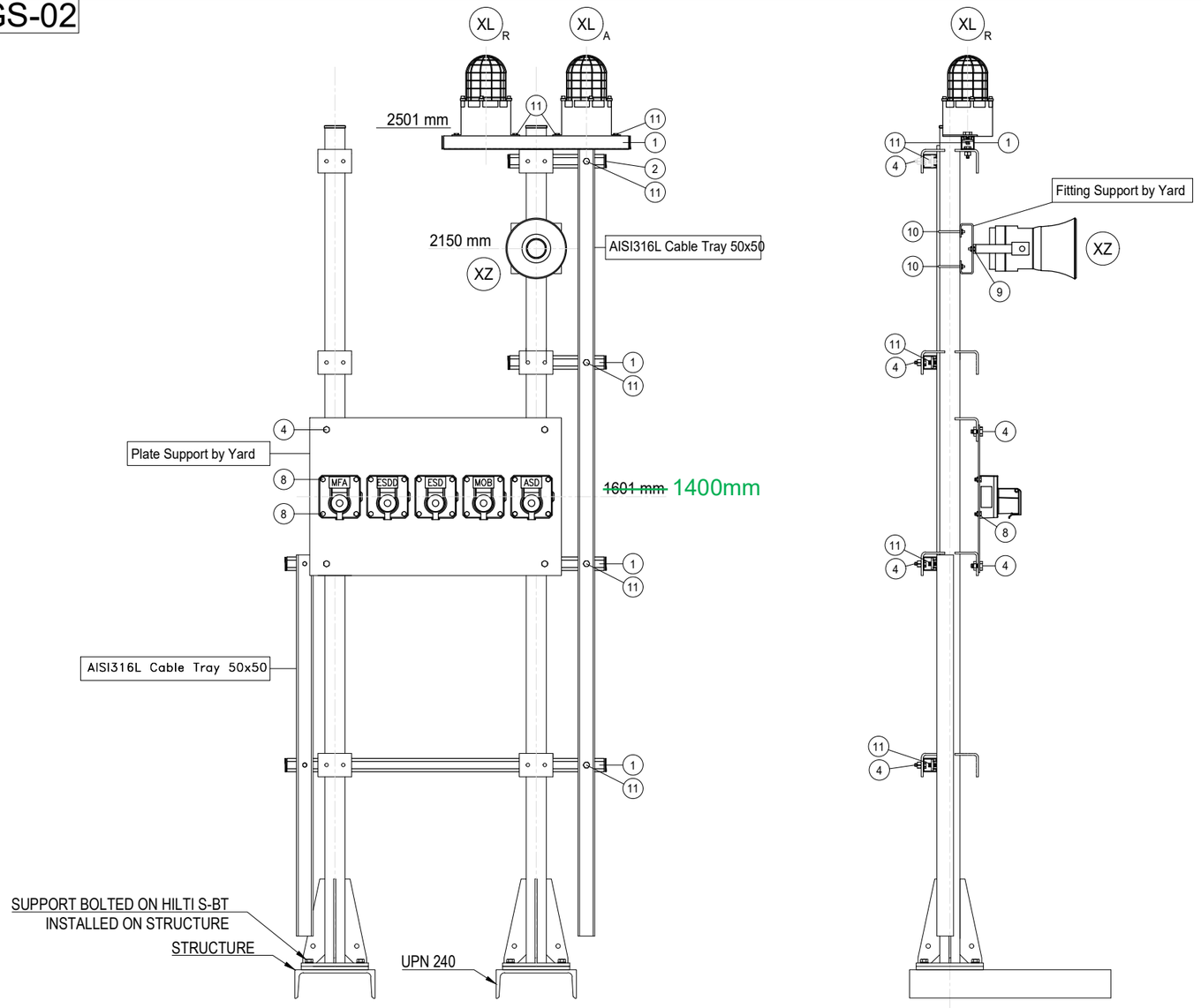
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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

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

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

ROSETTI MARINO SpA

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

CROSSWIND

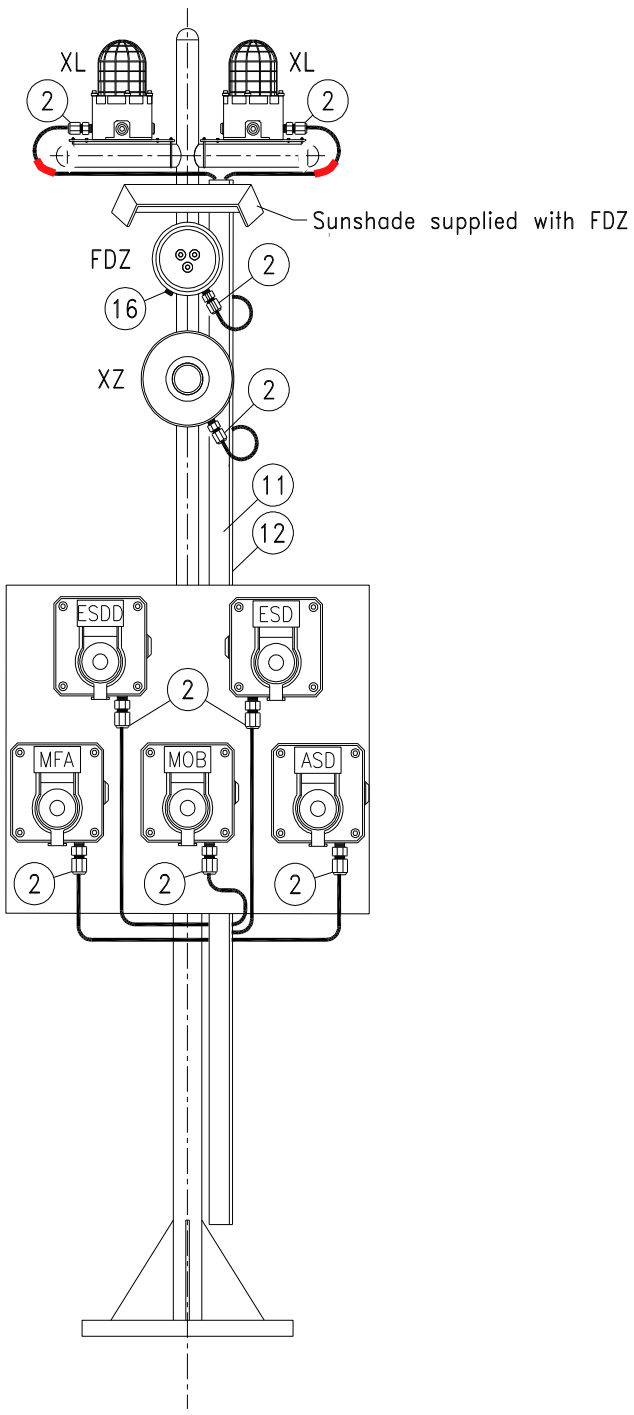
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
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

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	~~950-FDZ-04101~~
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-06101 (AMBER)
	950-XL-06102 (RED)
	~~950-FDZ-06101~~
	950-XZ-06101
	950-ESDD-06101
	950-ESD-06101
	950-MFA-06101
	950-MOB-06101
	950-ASD-06101
3	950-XL-01101 950-XL-01102 950-FDZ-01101 950-FDZ-02101 950-XZ-01101 950-ESDD-01101 950-ESD-01101 950-MOB-01101 950-ASD-01101 950-MFA-01101

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
16		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	9

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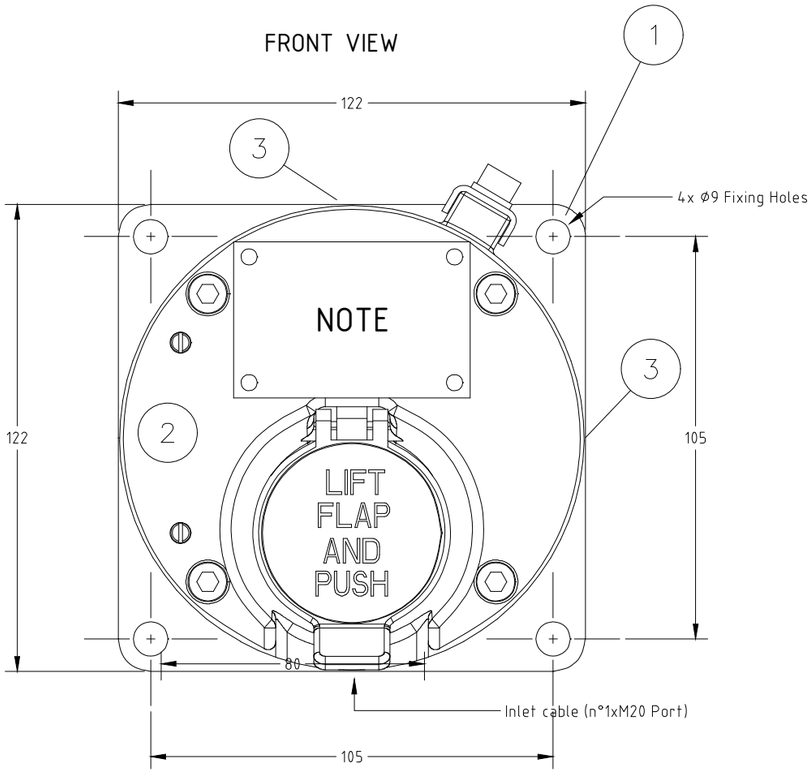
MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW)

ITEM	DESCRIPTIONS	NR
1	Manual Call Point (Push Button) (Yellow), MEDC SM87PBLSD1B1ROYHDYZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

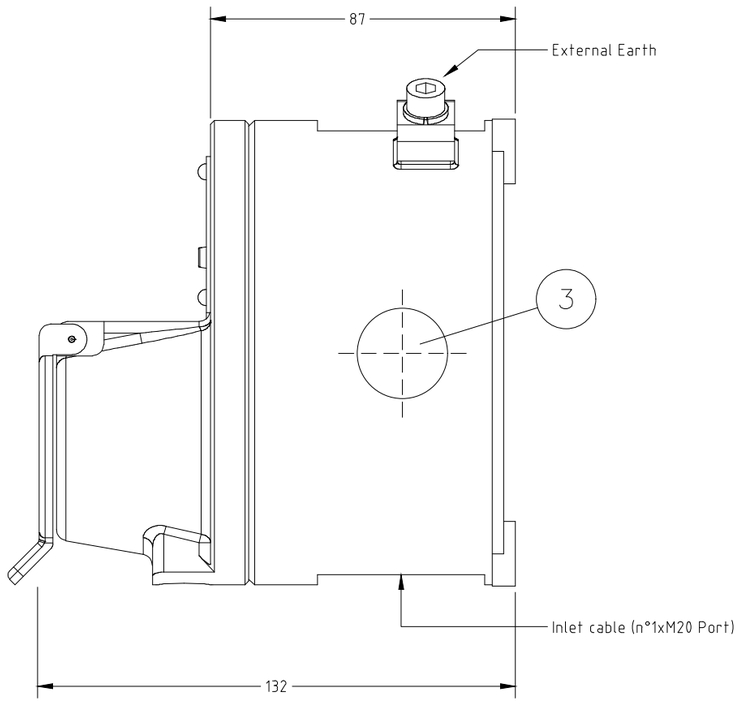
INSTALLATION QUANTITY

20

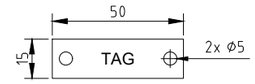
FRONT VIEW



SIDE VIEW



2 STAINLESS STEEL NAME PLATE DETAILS

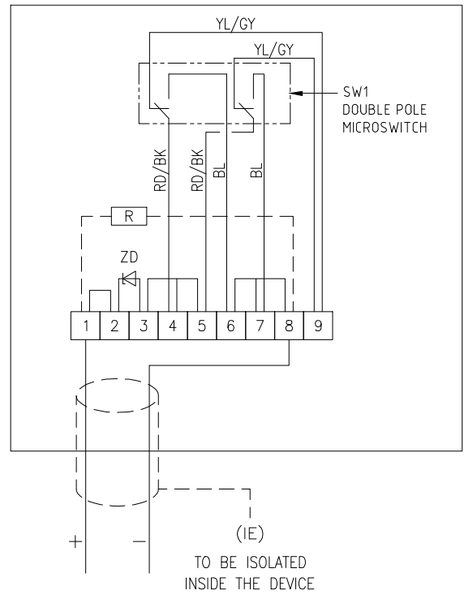


NOTE 5

WIRING

TERMINAL STRIP

ZD= ZENER 1N5339B 5.6V
R= 36 KOhm



NOTE

Q.TY	DUTY LABEL
5	ABANDON ACTIVATION
5	MAN OVER BOARD ACTIVATION
5	EMERGENCY SHUTDOWN ACTIVATION
5	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW) – TAG

POS.	TAG NUMBER
1	950-ASD-01101
2	950-ASD-03101
3	950-ASD-04101
4	950-ASD-06101
5	950-ASD-07101
6	950-MOB-01101
7	950-MOB-03101
8	950-MOB-04101
9	950-MOB-06101
10	950-MOB-07101
11	950-ESD-01101
12	950-ESD-03101
13	950-ESD-04101
14	950-ESD-06101
15	950-ESD-07101
16	950-ESDD-01101
17	950-ESDD-03101
18	950-ESDD-04101
19	950-ESDD-06101
20	950-ESDD-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW) – TAG

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 018 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

PUSH BUTTON TO SIS

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-ASD-01101	FZ-01 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
2	950-ASD-03101	FZ-03 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
3	950-ASD-04101	FZ-04 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
4	950-ASD-06101	FZ-06 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
5	950-ASD-07101	FZ-07 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
6	950-MOB-01101	FZ-01 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
7	950-MOB-03101	FZ-03 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
8	950-MOB-04101	FZ-04 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
9	950-MOB-06101	FZ-06 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
10	950-MOB-07101	FZ-07 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
11	950-ESD-01101	FZ-01 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
12	950-ESD-03101	FZ-03 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
13	950-ESD-04101	FZ-04 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
14	950-ESD-06101	FZ-06 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
15	950-ESD-07101	FZ-07 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
16	950-ESDD-01101	FZ-01 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
17	950-ESDD-03101	FZ-03 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
18	950-ESDD-04101	FZ-04 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
19	950-ESDD-06101	FZ-06 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
20	950-ESDD-07101	FZ-07 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION 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

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

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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

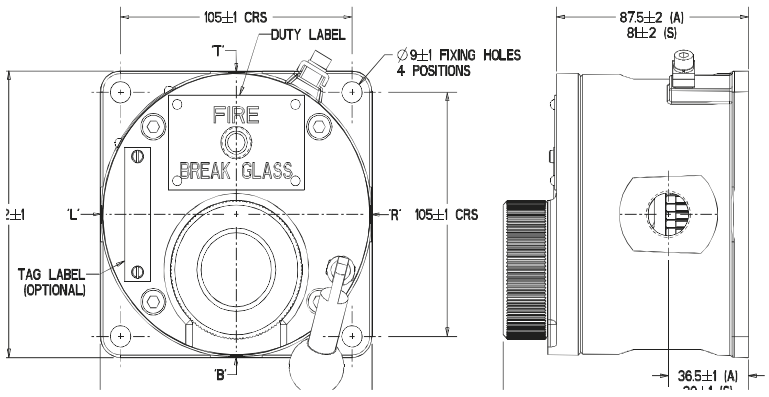
ATEX Ex d	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C 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

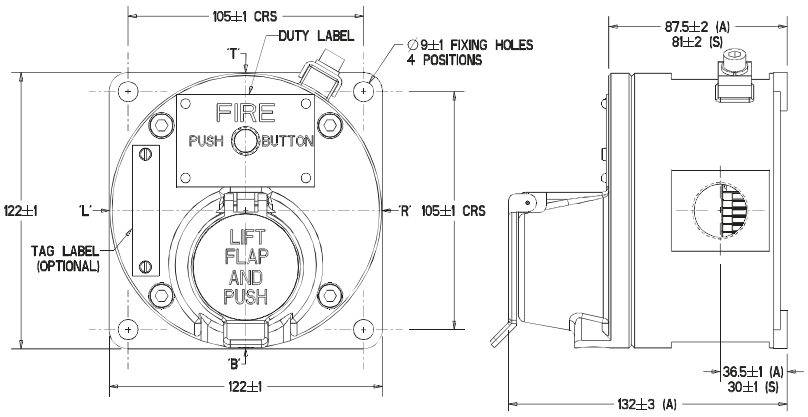
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high 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	Y

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-ESDD-04101	: FZ-04 ESD-1D Push Button Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	79-13	: Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)			Module	LD
TASK	code	C10000966		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

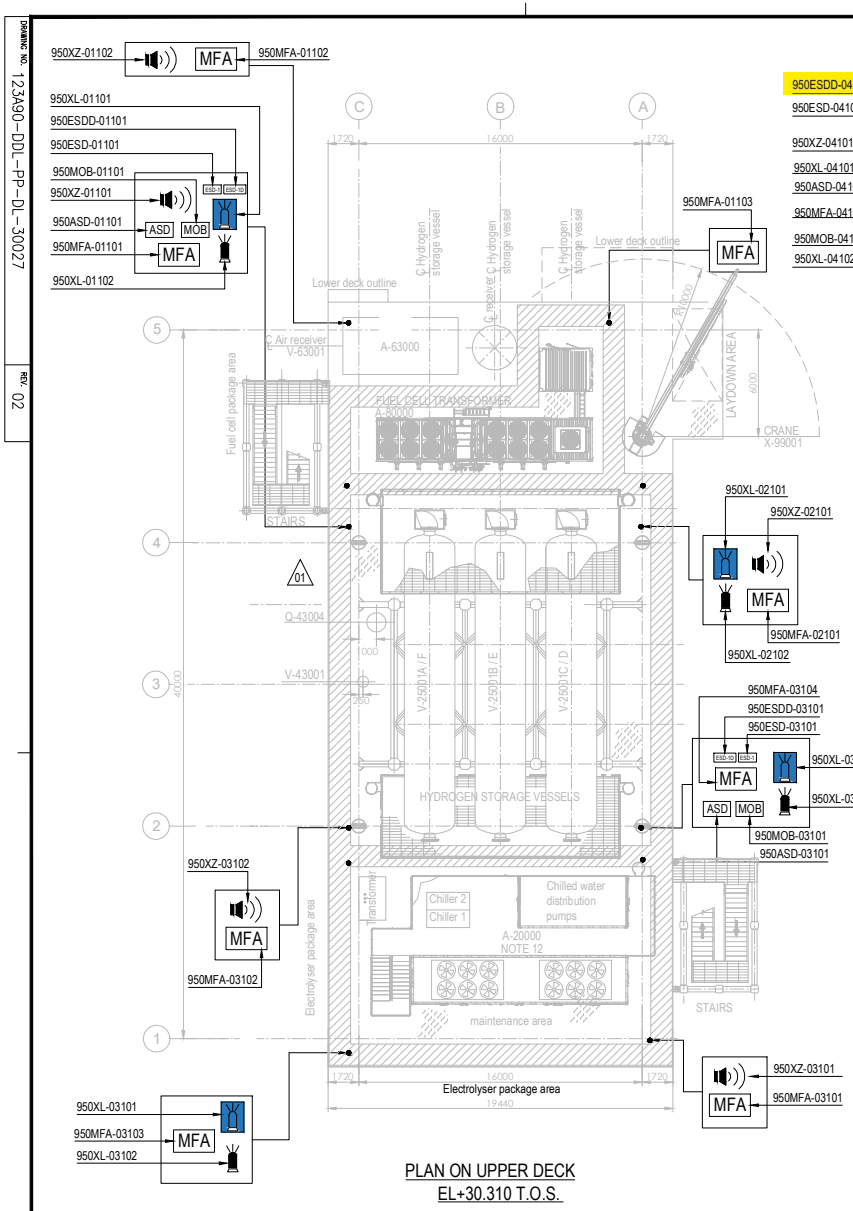
1	Check for mechanical damage.	PL
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (if required).	OK
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
8	Check supporting and protection against vibrations.	PL
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	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-07	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-07T07:54:56.651Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:52:30.921Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



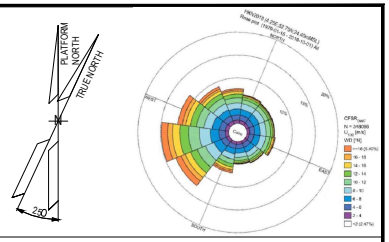
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-SAF-DL-30027

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 - LOWER & UPPER 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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

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

REV. 01

FIELD

INSTRUMENTS

JUNCTION BOX

00-JE-22001

MULTICABLE

No.

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-SIS-001

<01>

25-ZSL-019 (NO/C) WH BK PR1

25-ZSH-019 (NO/C) WH BK PR2

NOTE-2

C-25-BDV-019/00-JE-22001
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

950-ASD-01101 (1/8) WH BK NOTE-2
C-950-ASD-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-01101 (1/8) WH BK NOTE-2
C-950-MOB-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-01101 (1/8) WH BK NOTE-2
C-950-ESD-01101/00-JE-22001
~~C-950-ESD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-01101 (1/8) WH BK NOTE-2
C-950-ESDD-01101/00-JE-22001
~~C-950-ESDD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ASD-04101 (1/8) WH BK NOTE-2
C-950-ASD-04101/00-JE-22001
~~C-950-ASD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-04101 (1/8) WH BK NOTE-2
C-950-MOB-04101/00-JE-22001
~~C-950-MOB-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-04101 (1/8) WH BK NOTE-2
C-950-ESD-04101/00-JE-22001
~~C-950-ESD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-04101 (1/8) WH BK NOTE-2
C-950-ESDD-04101/00-JE-22001
~~C-950-ESDD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-2

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

00-JE-22001_2/B400-SIS-001
12x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-22001

PR1	25	25-ZSL-019
Shield Bar	26	
PR2	27	25-ZSH-019
Shield Bar	28	
PR3	29	950-ASD-01101
Shield Bar	30	
PR4	31	950-MOB-01101
Shield Bar	32	
PR5	33	950-ESD-01101
Shield Bar	34	
PR6	35	950-ESDD-01101
Shield Bar	36	
PR7	37	950-ASD-04101
Shield Bar	38	
PR8	38	950-MOB-04101
Shield Bar	40	
PR9	41	950-ESD-04101
Shield Bar	42	
PR10	43	950-ESDD-04101
Shield Bar	44	
PR11	45	SPARE
Shield Bar	46	
PR12	47	SPARE
Shield Bar	48	

Shield Bar — I.E.

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

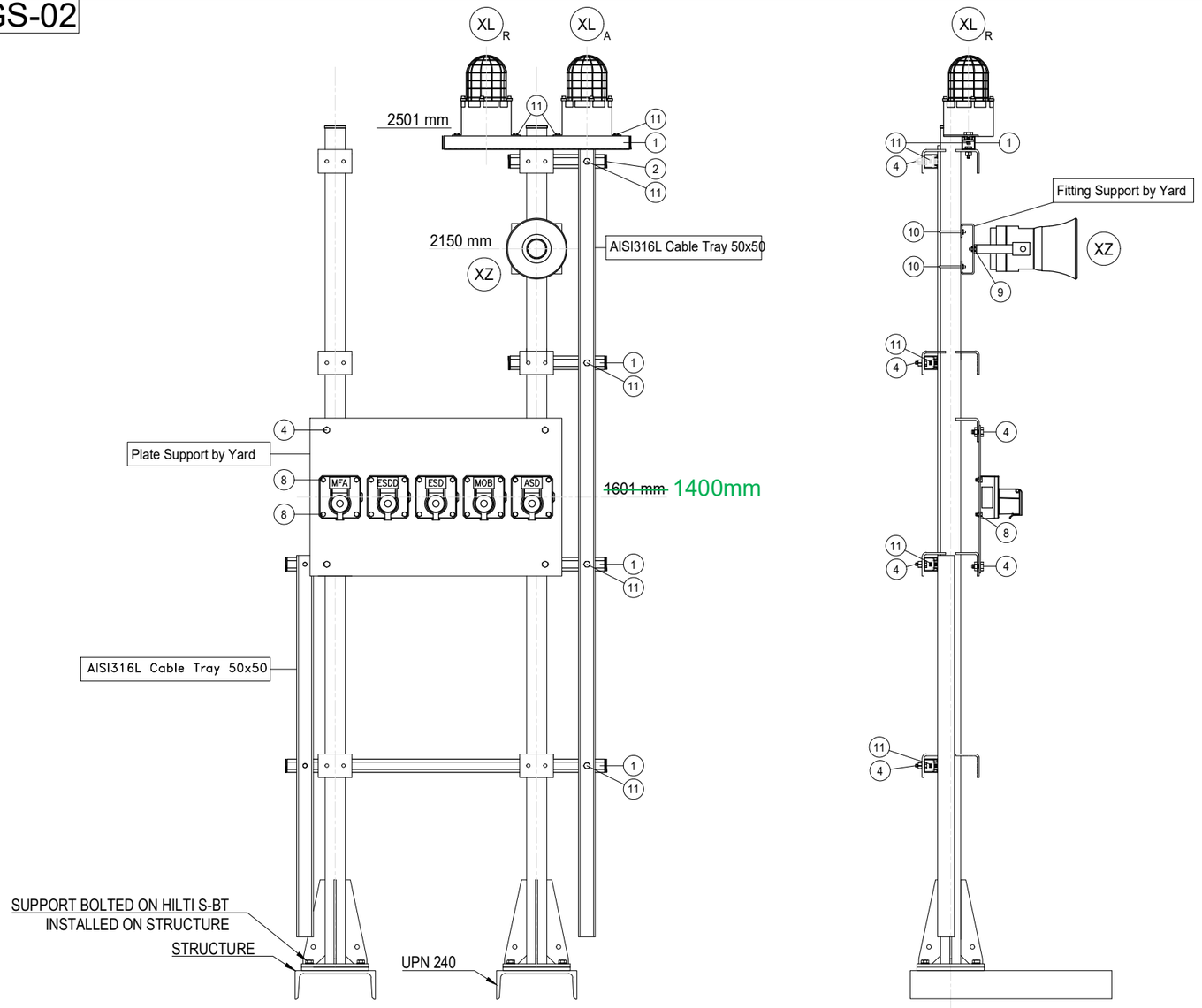
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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

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

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

ROSETTI MARINO SpA

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

CROSSWIND

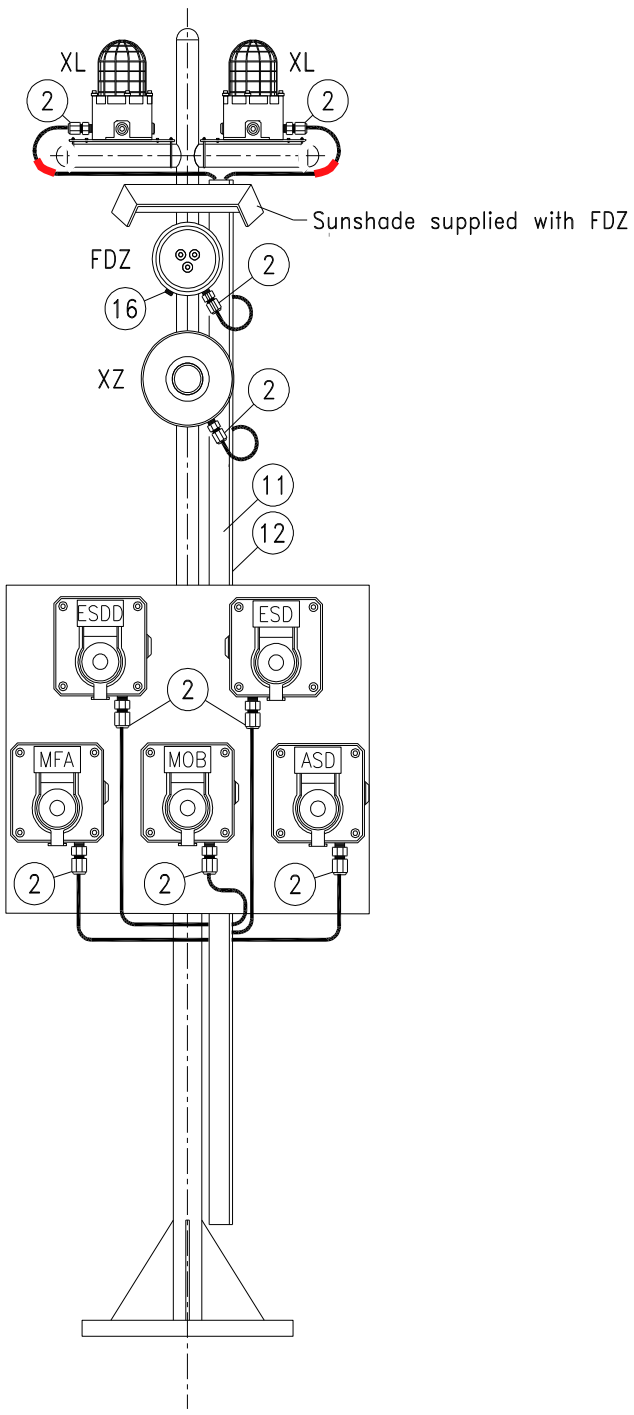
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
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

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	~~950-FDZ-04101~~
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-06101 (AMBER)
	950-XL-06102 (RED)
	~~950-FDZ-06101~~
	950-XZ-06101
	950-ESDD-06101
	950-ESD-06101
	950-MFA-06101
	950-MOB-06101
	950-ASD-06101
3	950-XL-01101 950-XL-01102 950-FDZ-01101 950-FDZ-02101 950-XZ-01101 950-ESDD-01101 950-ESD-01101 950-MOB-01101 950-ASD-01101 950-MFA-01101

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
16		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	9

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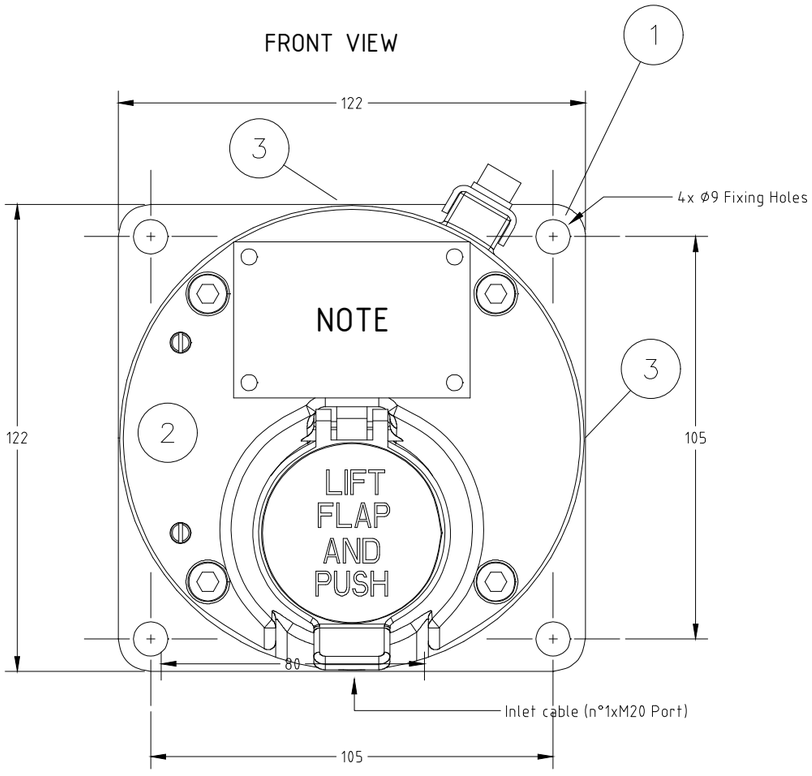
MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW)

ITEM	DESCRIPTIONS	NR
1	Manual Call Point (Push Button) (Yellow), MEDC SM87PBLSD1B1ROYHDYZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

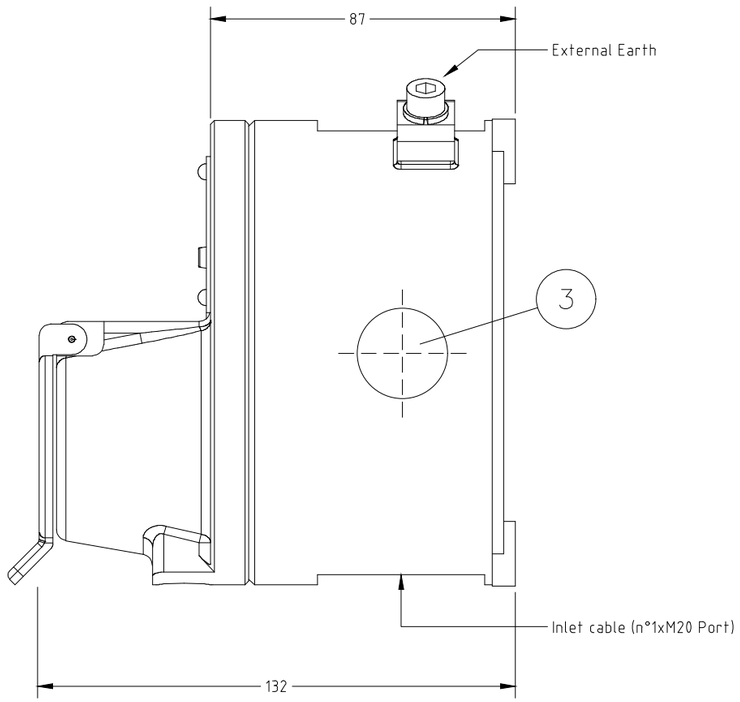
INSTALLATION QUANTITY

20

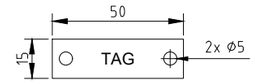
FRONT VIEW



SIDE VIEW



2 STAINLESS STEEL NAME PLATE DETAILS

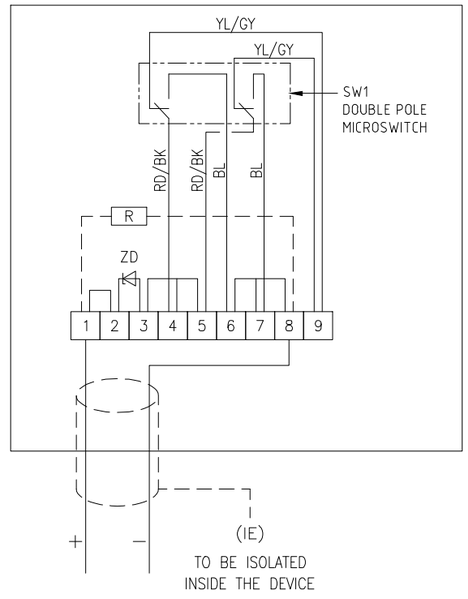


NOTE 5

WIRING

TERMINAL STRIP

ZD= ZENER 1N5339B 5.6V
R= 36 KOhm



NOTE

Q.TY	DUTY LABEL
5	ABANDON ACTIVATION
5	MAN OVER BOARD ACTIVATION
5	EMERGENCY SHUTDOWN ACTIVATION
5	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW) – TAG

POS.	TAG NUMBER
1	950-ASD-01101
2	950-ASD-03101
3	950-ASD-04101
4	950-ASD-06101
5	950-ASD-07101
6	950-MOB-01101
7	950-MOB-03101
8	950-MOB-04101
9	950-MOB-06101
10	950-MOB-07101
11	950-ESD-01101
12	950-ESD-03101
13	950-ESD-04101
14	950-ESD-06101
15	950-ESD-07101
16	950-ESDD-01101
17	950-ESDD-03101
18	950-ESDD-04101
19	950-ESDD-06101
20	950-ESDD-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW) – TAG

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 018 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

PUSH BUTTON TO SIS

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-ASD-01101	FZ-01 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
2	950-ASD-03101	FZ-03 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
3	950-ASD-04101	FZ-04 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
4	950-ASD-06101	FZ-06 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
5	950-ASD-07101	FZ-07 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
6	950-MOB-01101	FZ-01 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
7	950-MOB-03101	FZ-03 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
8	950-MOB-04101	FZ-04 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
9	950-MOB-06101	FZ-06 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
10	950-MOB-07101	FZ-07 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
11	950-ESD-01101	FZ-01 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
12	950-ESD-03101	FZ-03 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
13	950-ESD-04101	FZ-04 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
14	950-ESD-06101	FZ-06 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
15	950-ESD-07101	FZ-07 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
16	950-ESDD-01101	FZ-01 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
17	950-ESDD-03101	FZ-03 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
18	950-ESDD-04101	FZ-04 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
19	950-ESDD-06101	FZ-06 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
20	950-ESDD-07101	FZ-07 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION 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

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Oddicroft Lane
Sutton in Ashfield
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All other trademarks are property of their respective owners.

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

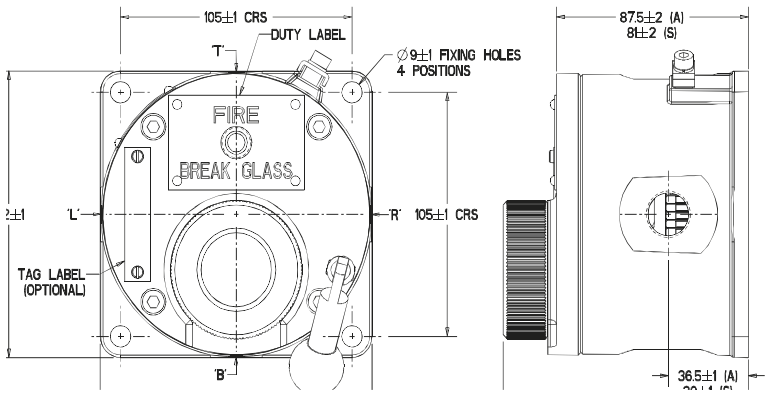
ATEX Ex d	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C 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

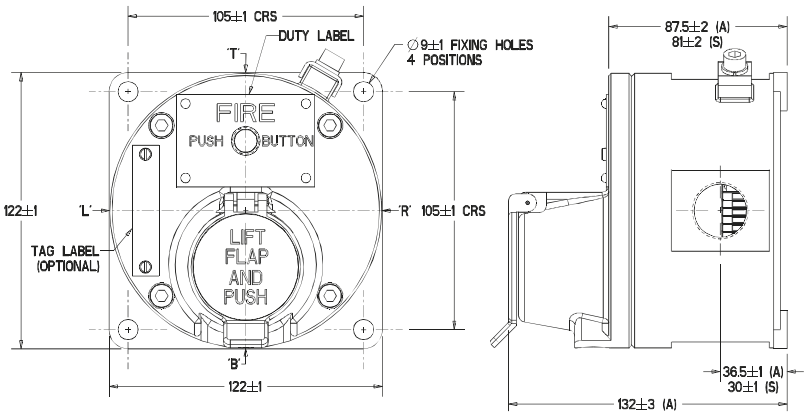
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high 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	Y

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-MOB-04101	: FZ-04 Man Over Board Activation			Dwg	123A90-DDL-SAF-DL-30027
	S/Sys	79-13	: Emergency Shutdown Systems (SIS) - Devices FZ-04 (B-400 I&T Equipment Room External)			Module	LD
TASK	code	C10001075		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

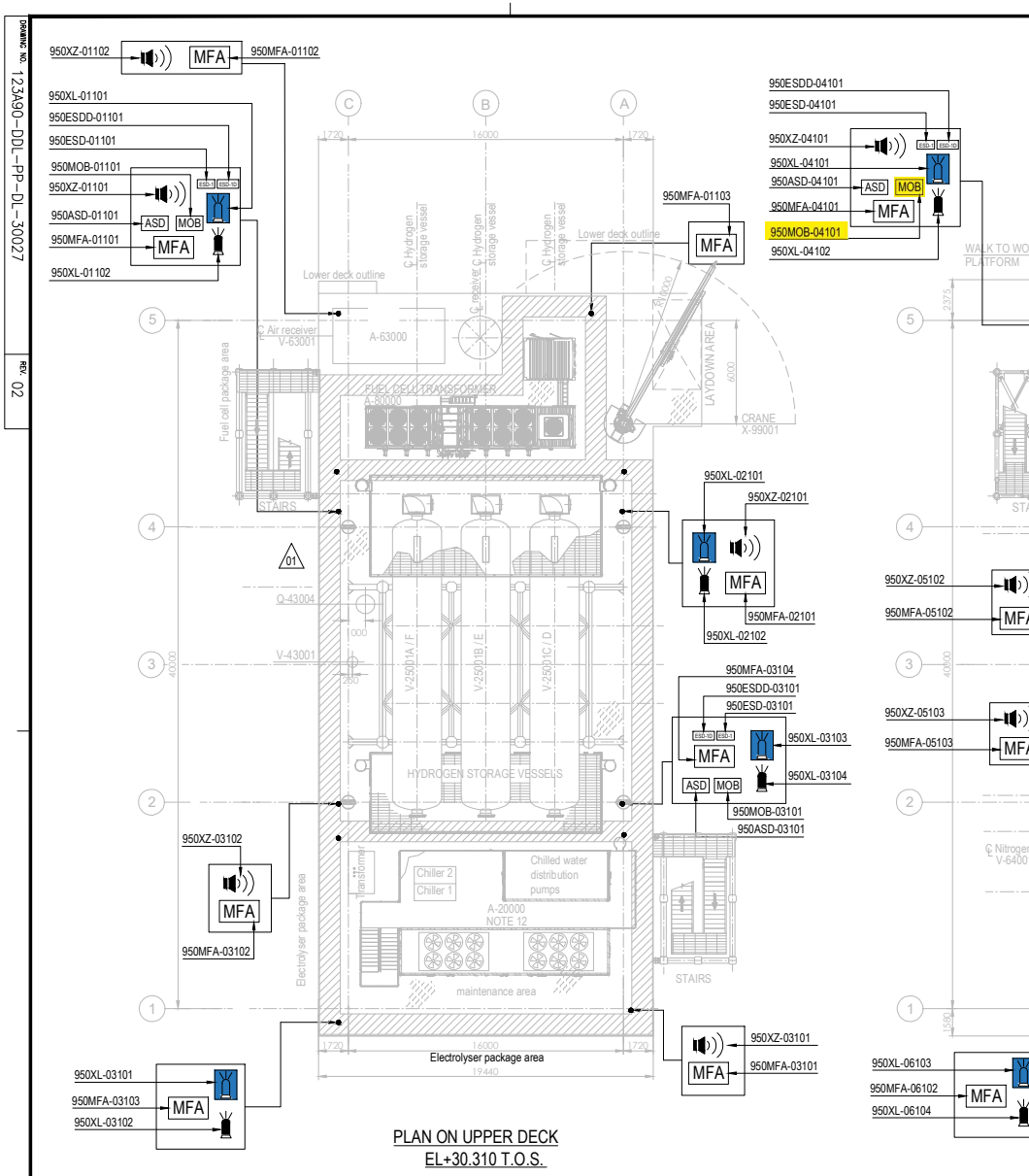
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (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.	PL
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	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-12-03	2025-01-02	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-03T17:05:16.332Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-02T16:54:26.866Z	

DRAWING NO. 123A90-DDL-PP-DL-30027

REV. 02



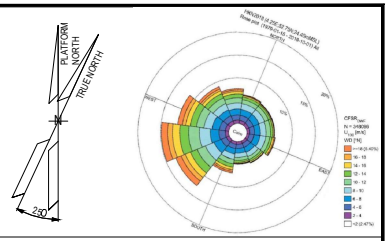
PLAN ON UPPER DECK
EL+30.310 T.O.S.

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

EQUIPMENT LIST

TAG NUMBER	DESCRIPTION	TAG NUMBER	DESCRIPTION
A-20000	ELECTROLYSER	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV
A-63000	INSTRUMENT AIR PACKAGE	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV
A-80000	FUEL CELL	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT
A-85000	BESS	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR
A-50000	WATER TREATMENT PACKAGE	V-63001	AIR RECEIVER
P-50001A/B	SEAWATER LIFT PUMPS	V-64001	NITROGEN RECEIVER
Q-43004	HYDROGEN VENT	X-99001	CRANE
A-64000	NITROGEN SYSTEM		
V-25001A-F	HYDROGEN STORAGE VESSELS		
V-43001	HYDROGEN VENT KO DRUM		
YLB-079001/2	LIFE RAFTS		
B-100	HV/MV SWITCHROOM 66kV/6.6kV		
B-200	LV SWITCHROOM 400V		
B-300	AC UPS EQUIPMENT ROOM		
B-400	I&T EQUIPMENT ROOM		

SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION	QTY.
	SOUNDER (XZ)	11		FIRE BEACON (XL) COLOR: RED	8
MOB	MAN OVER BOARD (MOB)	4		FLAMMABLE GAS RELEASE BEACON (XL) COLOR: AMBER	8
ASD	ABANDON SHUTDOWN (ASD)	4	ESD-1	ESD-1 PUSH BUTTON (ESD)	4
MFA	MANUAL FIRE ALARM (MFA)	16	ESD-1D	ESD-1D PUSH BUTTON (ESDD)	4



NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. VENDOR TO DEFINE AND SUPPLY ALL FIRE & GAS DETECTORS TO BE USED IN FUEL CELL, ELECTROLYSER AND BESS. TO BE IN COMPLIANCE WITH PROJECT REQUIREMENTS. THESE WILL BE SHOWN IN THE NEXT REVISON OF THE DOCUMENT.
4. PERSONNEL EXPECTED TO USE HANDHELD HYDROGEN AND LOW OXYGEN DETECTORS WHEN WORKING IN CONFINED SPACES ENTRY.
5. DETAIL LOCATION IS SHOWN IN THE 3D MODEL.
6. COMPLETE TAG IS ALWAYS "950-" (I.E. 950MFA-04203 IS 950-MFA-04203)

ELEVATION

1. ALL BUTTONS ARE 1.5M TOP
2. SOUNDERS AND BEACON ARE 2.4/2.5M

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-SAF-DL-30027

REV.:	DATE:	SIGNATURE:
2_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-SAF-RE-30020	FERA REPORT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	23/10/24	ECA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 - LOWER & UPPER 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 23/10/24
A1	DRAWING NO. 123A90-DDL-SAF-DL-30027	SHEET 002	REV. 02

File Name : - 123A90-DDL-SAF-DL-30027 Rev.02

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

REV. 01

FIELD

INSTRUMENTS

JUNCTION BOX

00-JE-22001

MULTICABLE

No.

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-SIS-001

<01>

25-ZSL-019 (NO/C) WH BK PR1

25-ZSH-019 (NO/C) WH BK PR2

NOTE-2

C-25-BDV-019/00-JE-22001
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

950-ASD-01101 (1/8) WH BK NOTE-2
C-950-ASD-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-01101 (1/8) WH BK NOTE-2
C-950-MOB-01101/00-JE-22001
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-01101 (1/8) WH BK NOTE-2
C-950-ESD-01101/00-JE-22001
~~C-950-ESD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-01101 (1/8) WH BK NOTE-2
C-950-ESDD-01101/00-JE-22001
~~C-950-ESDD-01101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ASD-04101 (1/8) WH BK NOTE-2
C-950-ASD-04101/00-JE-22001
~~C-950-ASD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MOB-04101 (1/8) WH BK NOTE-2
C-950-MOB-04101/00-JE-22001
~~C-950-MOB-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESD-04101 (1/8) WH BK NOTE-2
C-950-ESD-04101/00-JE-22001
~~C-950-ESD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-ESDD-04101 (1/8) WH BK NOTE-2
C-950-ESDD-04101/00-JE-22001
~~C-950-ESDD-04101/00-JE-22002~~
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-2

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

00-JE-22001_2/B400-SIS-001
12x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-22001

PR1	25	25-ZSL-019
Shield Bar	26	
PR2	27	25-ZSH-019
Shield Bar	28	
PR3	29	950-ASD-01101
Shield Bar	30	
PR4	31	950-MOB-01101
Shield Bar	32	
PR5	33	950-ESD-01101
Shield Bar	34	
PR6	35	950-ESDD-01101
Shield Bar	36	
PR7	37	950-ASD-04101
Shield Bar	38	
PR8	38	950-MOB-04101
Shield Bar	40	
PR9	41	950-ESD-04101
Shield Bar	42	
PR10	43	950-ESDD-04101
Shield Bar	44	
PR11	45	SPARE
Shield Bar	46	
PR12	47	SPARE
Shield Bar	48	

Shield Bar — I.E.

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22001–SH.2 OF 2

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

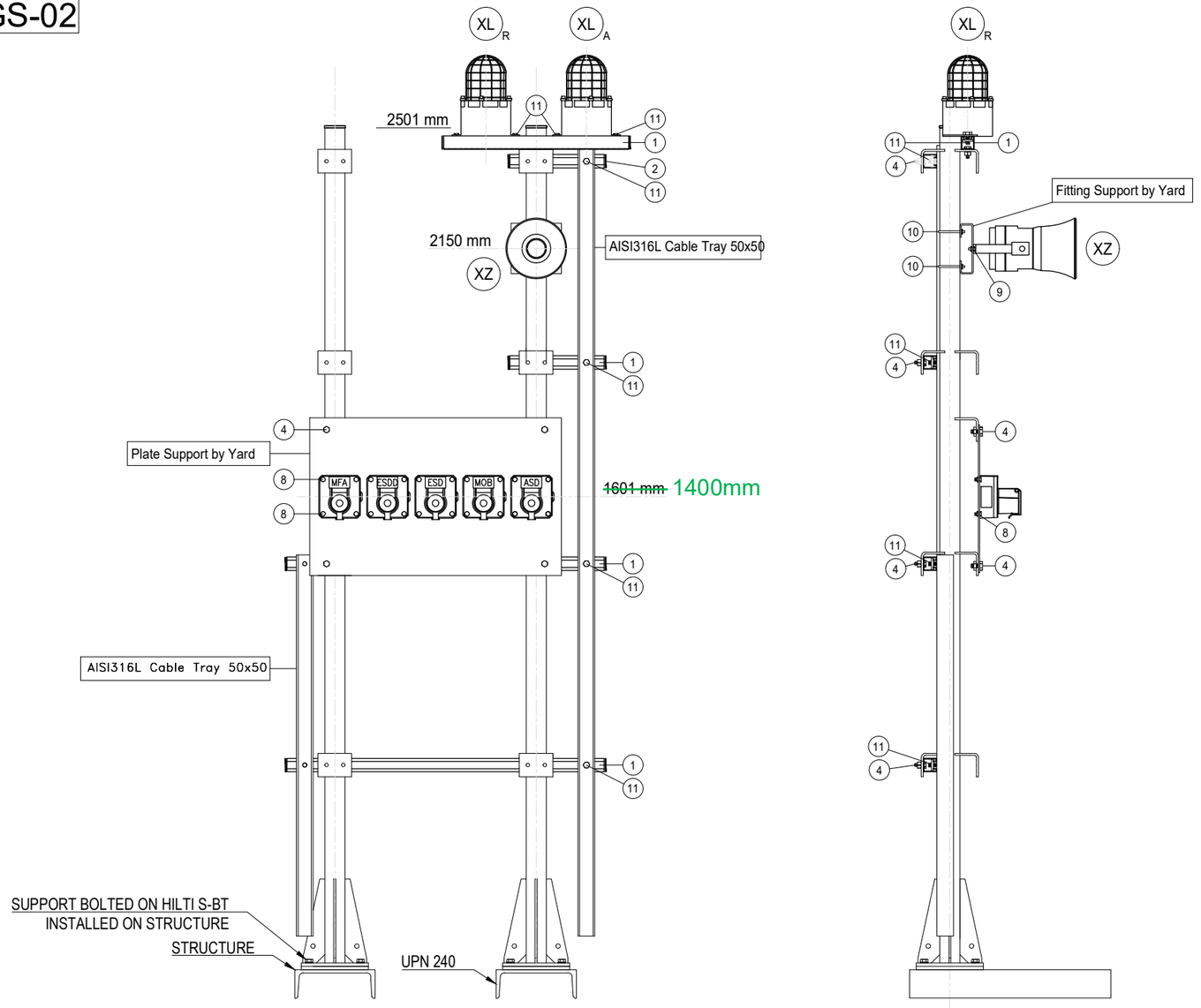
A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 011	REV. 01

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

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

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

ROSETTI MARINO SpA

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

CROSSWIND

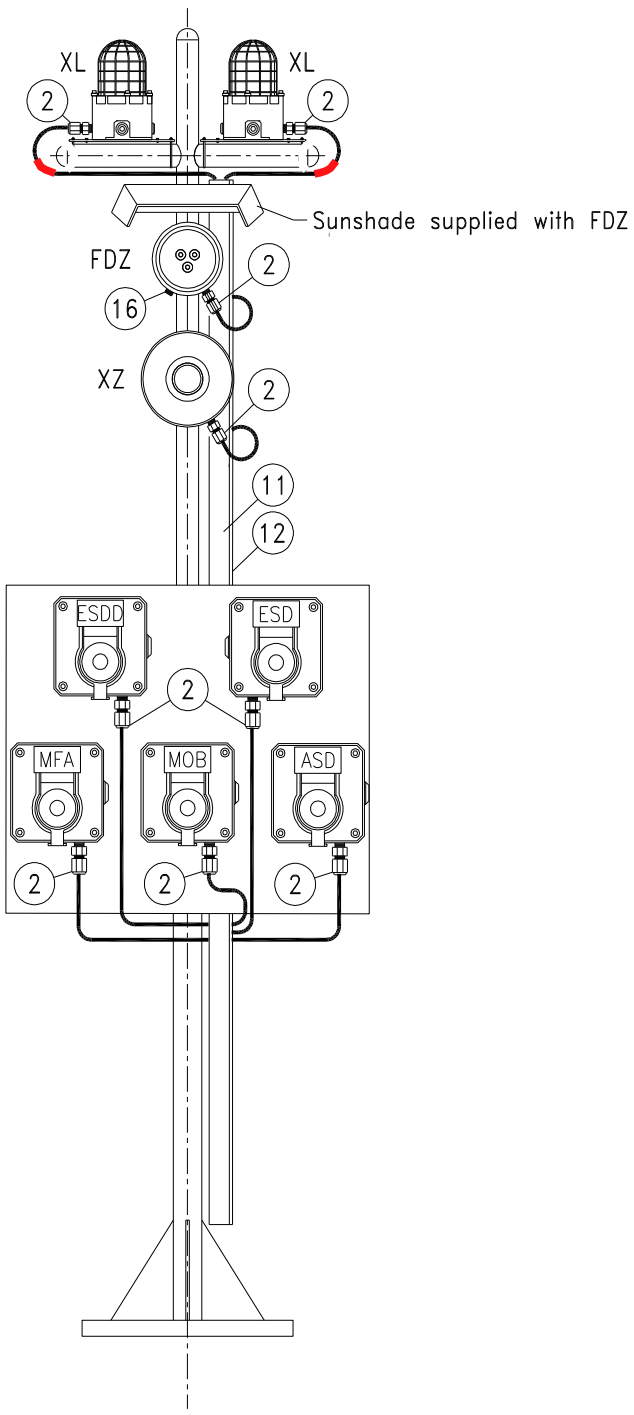
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
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

ELECTRICAL HOOK-UP FOR FIRE & GAS DEVICES



INSTRUMENT TAG	
1	950-XL-04101 (AMBER)
	950-XL-04102 (RED)
	~~950-FDZ-04101~~
	950-XZ-04101
	950-ESDD-04101
	950-ESD-04101
	950-MFA-04101
	950-MOB-04101
	950-ASD-04101
2	950-XL-06101 (AMBER)
	950-XL-06102 (RED)
	~~950-FDZ-06101~~
	950-XZ-06101
	950-ESDD-06101
	950-ESD-06101
	950-MFA-06101
	950-MOB-06101
	950-ASD-06101
3	950-XL-01101 950-XL-01102 950-FDZ-01101 950-FDZ-02101 950-XZ-01101 950-ESDD-01101 950-ESD-01101 950-MOB-01101 950-ASD-01101 950-MFA-01101

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
16		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	9

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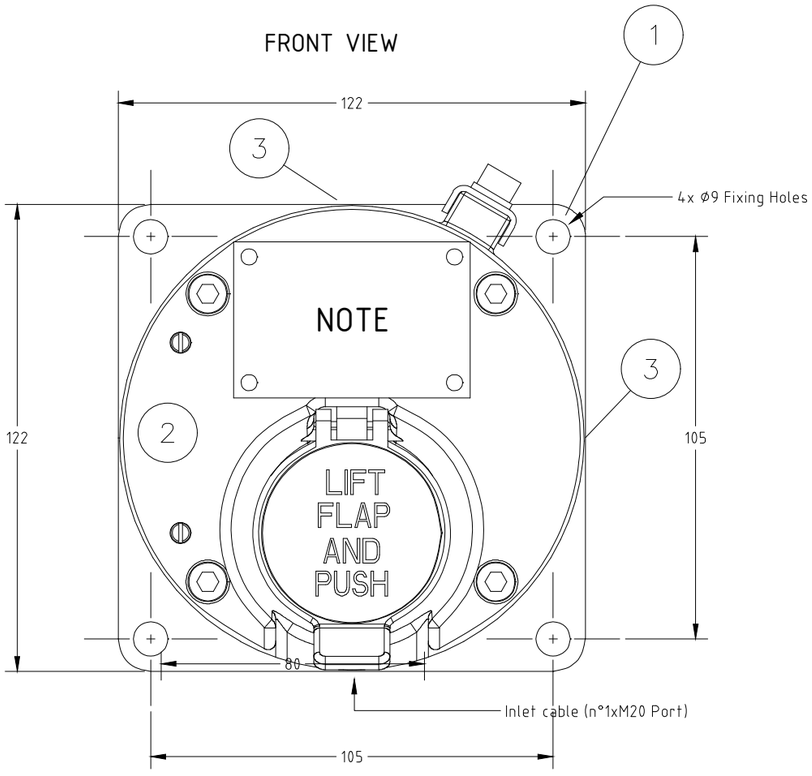
MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW)

ITEM	DESCRIPTIONS	NR
1	Manual Call Point (Push Button) (Yellow), MEDC SM87PBLSD1B1ROYHDYZ	1
2	Stainless Steel Name Plate	1
3	Stop Plug M20 Ex d AISI 316	2
4		
5		
6		
7		
8		
9		
10		

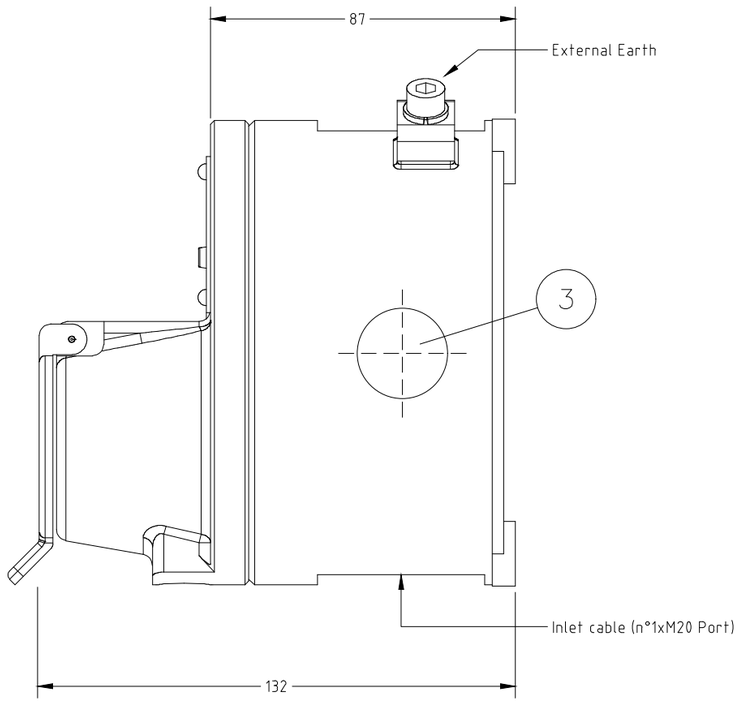
INSTALLATION QUANTITY

20

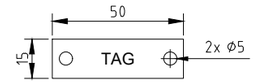
FRONT VIEW



SIDE VIEW



2 STAINLESS STEEL NAME PLATE DETAILS

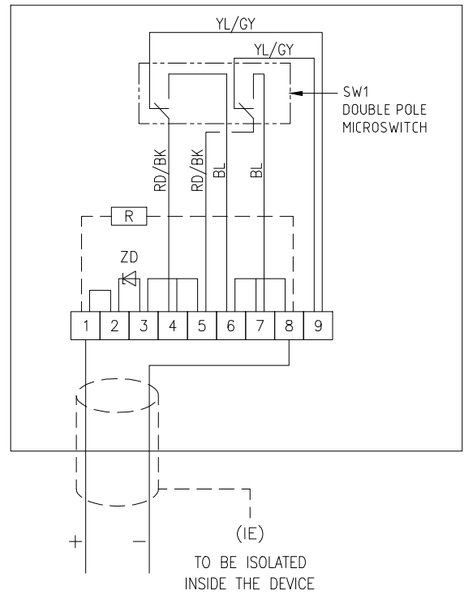


NOTE 5

WIRING

TERMINAL STRIP

ZD= ZENER 1N5339B 5.6V
R= 36 KOhm



NOTE

Q.TY	DUTY LABEL
5	ABANDON ACTIVATION
5	MAN OVER BOARD ACTIVATION
5	EMERGENCY SHUTDOWN ACTIVATION
5	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW)

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

SCALE : NTS

A3

DRAWING NO. 1724000821-IN-DA-00003

SHEET 017

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

MANUAL CALL POINT (PUSH BUTTON TO SIS) (YELLOW) – TAG

POS.	TAG NUMBER
1	950-ASD-01101
2	950-ASD-03101
3	950-ASD-04101
4	950-ASD-06101
5	950-ASD-07101
6	950-MOB-01101
7	950-MOB-03101
8	950-MOB-04101
9	950-MOB-06101
10	950-MOB-07101
11	950-ESD-01101
12	950-ESD-03101
13	950-ESD-04101
14	950-ESD-06101
15	950-ESD-07101
16	950-ESDD-01101
17	950-ESDD-03101
18	950-ESDD-04101
19	950-ESDD-06101
20	950-ESDD-07101

FORES ENGINEERING

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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 (PUSH BUTTON TO SIS) (YELLOW) – TAG

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

A3 | DRAWING NO. 1724000821-IN-DA-00003 | SHEET 018 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000821-IN-DA-00003 Rev. 02

PUSH BUTTON TO SIS

POS.	TAG NUMBER	SERVICE	DUTY LABEL
1	950-ASD-01101	FZ-01 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
2	950-ASD-03101	FZ-03 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
3	950-ASD-04101	FZ-04 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
4	950-ASD-06101	FZ-06 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
5	950-ASD-07101	FZ-07 ABANDON SHUTDOWN ACTIVATION	ABANDON ACTIVATION
6	950-MOB-01101	FZ-01 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
7	950-MOB-03101	FZ-03 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
8	950-MOB-04101	FZ-04 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
9	950-MOB-06101	FZ-06 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
10	950-MOB-07101	FZ-07 MAN OVER BOARD ACTIVATION	MAN OVER BOARD ACTIVATION
11	950-ESD-01101	FZ-01 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
12	950-ESD-03101	FZ-03 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
13	950-ESD-04101	FZ-04 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
14	950-ESD-06101	FZ-06 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
15	950-ESD-07101	FZ-07 ESD-1 PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN ACTIVATION
16	950-ESDD-01101	FZ-01 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
17	950-ESDD-03101	FZ-03 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
18	950-ESDD-04101	FZ-04 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
19	950-ESDD-06101	FZ-06 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION ACTIVATION
20	950-ESDD-07101	FZ-07 ESD-1D PUSH BUTTON ACTIVATION	EMERGENCY SHUTDOWN DEPRESSURIZATION 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

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Oddicroft Lane
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No liability is accepted for any consequence of use.

Certifications

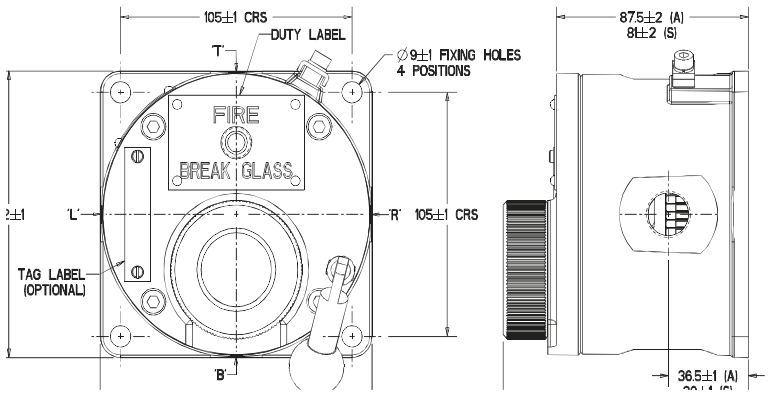
ATEX Ex d	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD Certified to: EN60079-0, EN60079-1, EN60079-31 Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C 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

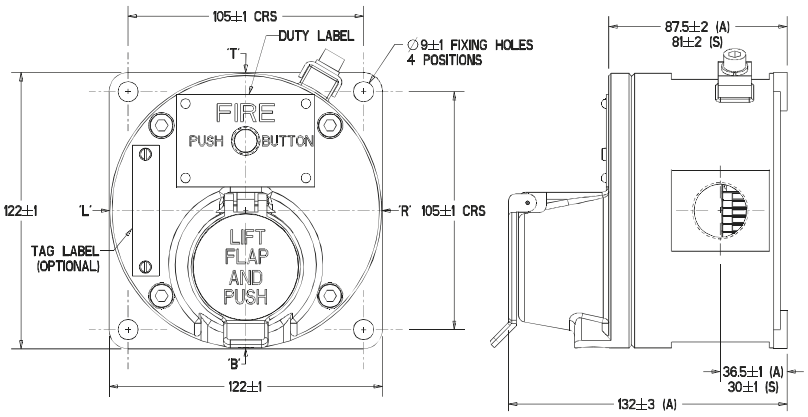
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high 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	Y

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

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