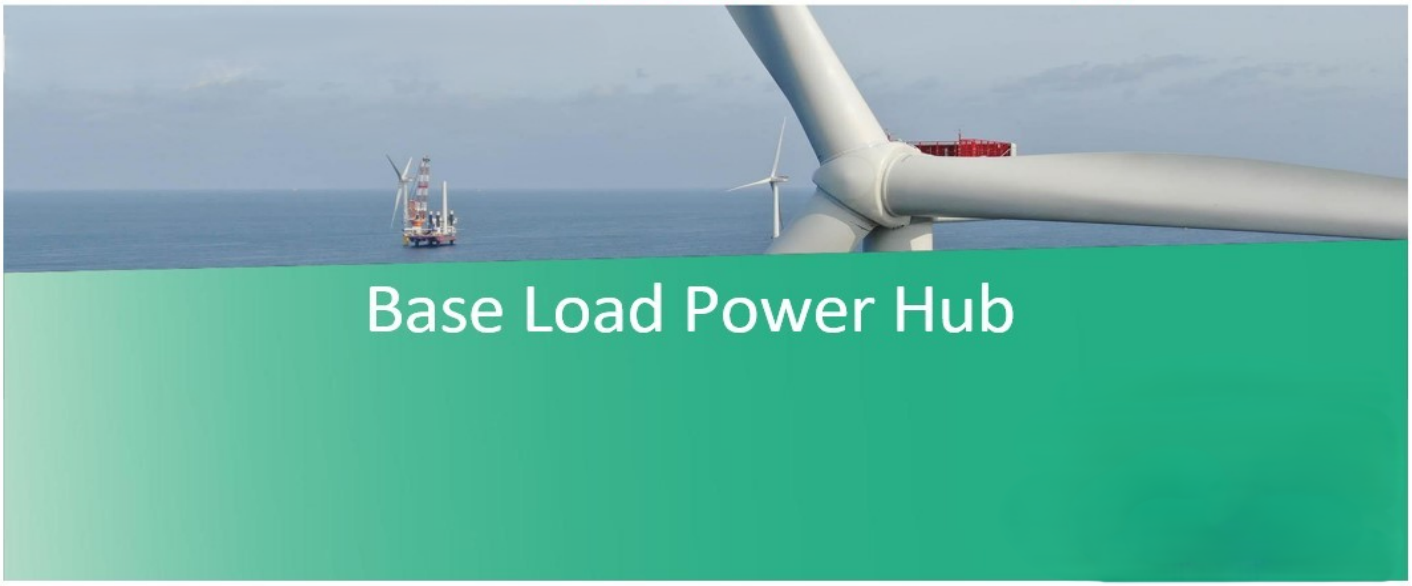
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	50 Fresh Water Systems
SUBSYSTEM	50-10 Water Desalination Package & Distribution

CROSSWIND

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

MECHANICAL COMPLETION DOSSIER INDEX

ROSETTI MARINO

Sub System N°:	50-10	**Tick as appropriate**	ONSHORE	O
Description:	Water Desalination Package & Distribution		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	O
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	O
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	O
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	O
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*	O
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*	OK
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:	2		Issued on:	2025-03-28	
System:	50	/	Fresh Water Systems		
SubSystem:	50-10	/	Water Desalination Package & Distribution		

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 17

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	2025-03-28	2025-03-28	2025-03-28	2025-03-28
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-03-28T15:29:08.923Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-03-28T16:17:23.518Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-03-28T16:19:23.620Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-03-28T16:19:33.395Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC

Electrical	50-10 Water Desalination Package & Distribution

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83016-CEL	LV Switchgear / Water Package	ONSHORE	C10000536	CPX09	100	2024-11-26	RFC 1
84313-CEL	AC UPS - PAS DB / UCP - Water Package	ONSHORE	C10000589	CPX09	100	2024-11-26	RFC 1
A-50000	Water Treatment Package	ONSHORE	C10002349	CZX01E	100	2024-11-26	RFC 2
JB-500E8	JB Water treatment package 1	ONSHORE	C10001278	CPX31	100	2024-11-26	RFC 1
JB-500F8	JB Water treatment package 2	ONSHORE	C10001279	CPX31	100	2024-11-26	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC

Instrumental	50-10 Water Desalination Package & Distribution

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-LP-002/B400-FGS-003	CONFIRMED GAS ALARM / MARSHALLING PCS	ONSHORE	C10001467	CJX10	100	2024-11-26	RFC 1
A-50000	Water Treatment Package	ONSHORE	C10002350	CZX01I	100	2024-11-26	RFC 2
C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	ONSHORE	C10004541	CJX10	100	2024-11-26	RFC 1
C-50-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10001450	CJX10	100	2024-11-26	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC

Mechanical	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A-50000	Water Treatment Package	ONSHORE	C10002351	CZX01M	100	2025-02-24	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC

Piping	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
001-1-J1	Joint 001-1-J1	ONSHORE	C10004171	TMX27	100	2025-02-18	RFC 2
001-1-J2	Joint 001-1-J2	ONSHORE	C10004172	TMX27	100	2025-02-14	RFC 2
001-1-J3	Joint 001-1-J3	ONSHORE	C10004173	TMX27	100	2025-03-06	RFC 2
001-1-J4	Joint 001-1-J4	ONSHORE	C10004174	TMX27	100	2025-03-06	RFC 2
50-10-TP-006	Test Pack 50-10-TP-006	ONSHORE	C10003270	CLX02A	100	2025-02-04	RFC 2
		ONSHORE	C10003271	CLX02B	100	2025-02-19	RFC 2
		ONSHORE	C10003272	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003273	TMX03	100	2025-02-04	RFC 2
		ONSHORE	C10003274	TMX05	100	2025-02-04	RFC 2
		ONSHORE	C10003276	TPLX05	100	2025-02-04	RFC 2
		ONSHORE	C10004929	CXX02	100	2025-02-25	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC

Telecom	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004348	CIX09	100	2024-11-27	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-10	Water Desalination Package & Distribution

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000923	A	50-LP-001/B400 -NET-001 C10004348	The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-01-09	Gtangianu 2025-01-09	2025-01-09
C30000958	A	50-LP-001/B400 -NET-001 C10004348	The cable termination is not installed in accordance with Electrical Typical Installation Details. see 123A90-DDL-EL-DD-20090 sh.8 / 29.	.		APolo 2024-11-27	2025-01-09	Ecarotenuto 2025-01-09	2025-01-09
C30000924	B	50-LP-001/B400 -NET-001 C10004348	The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000925	B	50-LP-001/B400 -NET-001 C10004348	Missing cable tag , cabinet input A-50000.	.		APolo 2024-11-26	2025-03-10	JKrizanic 2025-03-10	2025-03-10
C30000926	B	50-LP-001/B400 -NET-001 C10004348	Missing SS cable tag on MCT.	.		APolo 2024-11-26	2025-01-31	APolo 2025-01-31	2025-01-31

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001223	A	A-50000	Instrument damaged (50-HS-02)		FIXED AND TESTED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001225	A	A-50000	PSV-039, PSV-036 to be reversed		ACTIVITY DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001241	A	A-50000	Instrument non accessible, to be moved (50-PT-050, 50-PT-051)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001248	A	A-50000	PT/TT : Model / Manufacturer Fischer doesn't work, wiring to be modified inside control panel		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30000930	B	C-50-XS-001/B400-SIS-001 C10001450	Missing cable tags all along the route.	.		Gtangianu 2024-11-26	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000931	B	C-50-XS-001/B400-SIS-001 C10001450	Missing all core identification tags both side	.		Gtangianu 2024-11-26			
C30000932	B	C-50-XA-003/B400-SIS-001 C10004541	Missing all core identification tags both side.	.		Gtangianu 2024-11-26			
C30000933	B	C-50-XA-003/B400-SIS-001 C10004541	Shield not connected side B400-SIS-001	.		Gtangianu 2024-11-26	2025-01-31	APolo 2025-01-31	2025-01-31
C30000934	B	C-50-XA-003/B400-SIS-001 C10004541	Missing cable tag all along the route.	.		Gtangianu 2024-11-26	2025-02-26	Pschintu 2025-02-26	2025-02-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-10	Water Desalination Package & Distribution

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000935	B	C-50-XA-003/B400-SIS-001 C10004541	Cable needs to be better dressed inside the Package (A-50000 Water treatment) See attached photo.	.		Gtangianu 2024-11-26	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000944	B	50-LP-002/B400-FGS-003 C10001467	Missing cable tag all along the route.	.		Gtangianu 2024-11-26	2025-03-03	Gtangianu 2025-03-03	2025-03-03
C30000945	B	50-LP-002/B400-FGS-003 C10001467	Missing all core identification tags both side.	.		Gtangianu 2024-11-26			
C30000947	B	A-50000 C10002350	secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30000949	B	A-50000 C10002350	Various tag plates are missing inside the Water Treatment Package (A-50000).	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30001226	B	A-50000	Missing main description labels. To be installed (Fire alarm push button)		INSTALLED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001236	B	A-50000	PI-031, PI-033 to be tightened		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001240	B	A-50000	Label to be installed (AT-026)		IINSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001251	B	A-50000	Test report for F&G system to be provided (by SIA)		done - see attached	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001243	A	A-50000	To be installed panel with dedicated holes (All terminal points)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001244	A	A-50000	Correct measure with panel installed to be verified (All terminal points)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001247	A	A-50000	Container and control panel to be cleaned inside (50-LP-001)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001249	A	A-50000	Wrong connection panel side, to be verified (P-50003A/B)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30000938	B	83016-CEL C10000536	Missing cable tags all along the route	.		Gtangianu 2024-11-26	2025-02-25	APolo 2025-02-25	2025-02-25
C30000939	B	83016-CEL C10000536	Missing all core identification tags both side	.		Gtangianu 2024-11-26	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30000942	B	84313-CEL C10000589	Missing all core identification tags both side.	.		Gtangianu 2024-11-26	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30000943	B	84313-CEL C10000589	Missing cable tag all along the route. See attached photo.	.		Gtangianu 2024-11-26	2025-02-25	APolo 2025-02-25	2025-02-25
C30000946	B	A-50000 C10002349	Various tag plates are missing inside the Water Treatment Package (A-50000).	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-10	Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000948	B	A-50000 C10002349	secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30001219	B	A-50000	Missing label (HHS-50003A/B_container electric heater)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001220	B	A-50000	Earthing to be fixed (AT-020C)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001221	B	A-50000	Missing labels (MFA, sounder, lights)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001227	B	A-50000	Inside panel to be installed ferrules on power cable side (50-LP-001)		installed	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001228	B	A-50000	All MCT's to be fixed and closed (50-LP-001)		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001229	B	A-50000	Earthing cable to be fixed properly inside panel (50-LP-001)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001230	B	A-50000	Cables to be fixed properly inside the cable tray of the panel (50-LP-001)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001232	B	A-50000	Plastic strips to be cut		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems

SUBSYSTEM 50-10 Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001233	B	A-50000	Cables to be properly fixed in some points of the container		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001234	B	A-50000	Additional light to be added inside the container tank side, due to low visibility		Light has been moved in order to light better the area	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001235	B	A-50000	Missing traffolyte tag for all lamps		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001242	B	A-50000	Missing identification label (All terminal points)		Installed (see picture)	SLinari 2024-11-29	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30001245	B	A-50000	Correct tag to be installed (now is installed MV-626 instead of SP-626)		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001246	B	A-50000	Missing cable tags RM side (50-LP-001 and A-50000)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000480	B	A-50000	Surface preparation activities complied with ISO 12944. Inspection records were satisfactorily completed, but physical inspection of the			SLinari 2024-10-28			
C30000481	B	A-50000	Cable trays support fixed with pins inserted externally; PSC will put an epoxy fille (e.g. Sikaflex 291i) and painting (see Advisor Note n.			SLinari 2024-10-28			
C30001216	B	A-50000	Missing data nameplate (T-50006, T-50008)		INSTALLED	SLinari 2024-11-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30001217	B	A-50000	Traffolyte tag missing (P-50002A/B_back wash pump)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001218	B	A-50000	Missing label (HFA-50001A/B_container air fan)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001222	B	A-50000	Flexible to be connected and missing tag (P-50004A/B_HP Pump)		installed	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001224	B	A-50000	Missing adhesive labels (A-50007A/B_water reverse osmosis units)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001231	B	A-50000	Missing TAG outside container		installed	SLinari 2024-11-29	SLinari 2025-01-28	SLinari 2025-01-28	2025-01-28
C30001237	B	A-50000	Labels to be installed (P-50009A/B_fresh water pump)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001238	B	A-50000	Labels to be installed (S-50004_softening filter)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001239	B	A-50000	Position to be clarified (NRV-653)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001250	B	A-50000	Wrong rotation, to be fixed (P-50009A/B)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30004095	B	A-50000 C10002351	In the nameplate dimensions are 12192x2538x3140 mm; in document 1724000448-MAC-DAA-00005, these dimensions	.		LNovaga 2025-02-24			
C30004096	B	A-50000 C10002351	The structure is welded, not bolted. update drawings.	.		LNovaga 2025-02-24			
C30004097	B	A-50000 C10002351	Piping interface not completly reinstaded	.		LNovaga 2025-02-24			
C30004098	B	A-50000 C10002351	The grounding system is not as specified. In the field there are two grounding lugs on the north side. Produce a mark up on drawing	.		LNovaga 2025-02-24			
C30004099	B	A-50000 C10002351	There is a little damage on north side door. See attached photo.	.		LNovaga 2025-02-24	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30004100	B	A-50000 C10002351	There are mechanical damage. Restore the paint with a touch up	.		LNovaga 2025-02-24			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-10	Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004101	B	A-50000 C10002351	Some items are not in the correct position (see attached) relative to the document 1724000448-MAC-DA-00005. Align the drawing if	.		LNovaga 2025-02-24			
C30004102	B	A-50000 C10002351	Tag S-50002B is not installed.	.		LNovaga 2025-02-24	2025-03-01	LNovaga 2025-03-01	2025-03-01
C30004103	B	A-50000 C10002351	Tag T-50003 is not installed.	.		LNovaga 2025-02-24	2025-03-01	LNovaga 2025-03-01	2025-03-01
C30004104	B	A-50000 C10002351	The top terminal point cover on the west side has not been fixed.	.		LNovaga 2025-02-24	2025-03-27	LNovaga 2025-03-27	2025-03-27
C30004105	B	A-50000 C10002351	the covers of the terminal points at the bottom on the west side are not installed.	.		LNovaga 2025-02-24			
C30004106	B	A-50000 C10002351	General cleaning of package, especially on roof.	.		LNovaga 2025-02-24			
C30004121	B	A-50000 C10002351	TP-008 is missing, to be installed.			SLinari 2025-02-25			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001590	B	50-10-TP-006 C10003270	Bolts of supports S64 have not been tightened yet. Isolator C-9 missing from all clamps C-1. Correct gap of support C-33 not yet achieved.	.		KAlbonetti 2024-12-09	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30001591	B	50-10-TP-006 C10003270	Vertical misalignment between line and package interconnecting flange of around 40 mm.	.		KAlbonetti 2024-12-09	2024-02-17	KAlbonetti 2024-02-17	2024-02-17
C30003519	B	50-10-TP-006 C10003270	Spool E is lenght 117 mm instead of 147 mm as marked in the isometric. See attached photo.	.		KAlbonetti 2025-02-04			
C30004012	B	50-10-TP-006 C10003271	The support PS-02122.1is not aligned and does not fully touch the structural support. See attached photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004015	B	50-10-TP-006 C10003271	The support PS-02124.4 is not aligned and does not fully touch the structural support that has a misalignment as in photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004016	B	50-10-TP-006 C10003271	The support PS-02048.2 is not aligned and does not fully touch the structural support. See attached photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004295	B	50-10-TP-006 C10003272	Missing insulation from penetration T.O.S. EL. +30130 to joint 001-1-J4 for ongoing commissioning activities. See attached photo and	.		LNovaga 2025-03-28			
C30004296	B	50-10-TP-006 C10003272	Missing the insulation pillow around the joint 001-1-J1 and portion of pipe not insulated (refer to punch C30004295)	.		LNovaga 2025-03-28			
C30004297	B	50-10-TP-006 C10003272	Missing insulation sheet on water treatment side (see attached photo) and sealant between W2 and W3 on isometric 001	.		LNovaga 2025-03-28	2025-03-28	LNovaga 2025-03-28	2025-03-28

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-10	Water Desalination Package & Distribution

Telecom

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000923	A	50-LP-001/B400 -NET-001 C10004348	The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-01-09	Gtangianu 2025-01-09	2025-01-09
C30000958	A	50-LP-001/B400 -NET-001 C10004348	The cable termination is not installed in accordance with Electrical Typical Installation Details. see 123A90-DDL-EL-DD-20090 sh.8 / 29.	.		APolo 2024-11-27	2025-01-09	Ecarotenuto 2025-01-09	2025-01-09
C30000924	B	50-LP-001/B400 -NET-001 C10004348	The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.	.		APolo 2024-11-26	2025-02-04	APolo 2025-02-04	2025-02-04
C30000925	B	50-LP-001/B400 -NET-001 C10004348	Missing cable tag , cabinet input A-50000.	.		APolo 2024-11-26	2025-03-10	JKrizanic 2025-03-10	2025-03-10
C30000926	B	50-LP-001/B400 -NET-001 C10004348	Missing SS cable tag on MCT.	.		APolo 2024-11-26	2025-01-31	APolo 2025-01-31	2025-01-31

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PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001223	A	A-50000	Instrument damaged (50-HS-02)		FIXED AND TESTED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001225	A	A-50000	PSV-039, PSV-036 to be reversed		ACTIVITY DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001241	A	A-50000	Instrument non accessible, to be moved (50-PT-050, 50-PT-051)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001248	A	A-50000	PT/TT : Model / Manufacturer Fischer doesn't work, wiring to be modified inside control panel		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30000930	B	C-50-XS-001/B400-SIS-001 C10001450	Missing cable tags all along the route.	.		Gtangianu 2024-11-26	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000931	B	C-50-XS-001/B400-SIS-001 C10001450	Missing all core identification tags both side	.		Gtangianu 2024-11-26	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30000932	B	C-50-XA-003/B400-SIS-001 C10004541	Missing all core identification tags both side.	.		Gtangianu 2024-11-26	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30000933	B	C-50-XA-003/B400-SIS-001 C10004541	Shield not connected side B400-SIS-001	.		Gtangianu 2024-11-26	2025-01-31	APolo 2025-01-31	2025-01-31
C30000934	B	C-50-XA-003/B400-SIS-001 C10004541	Missing cable tag all along the route.	.		Gtangianu 2024-11-26	2025-02-26	Pschintu 2025-02-26	2025-02-26

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PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000935	B	C-50-XA-003/B400-SIS-001 C10004541	Cable needs to be better dressed inside the Package (A-50000 Water treatment) See attached photo.	.		Gtangianu 2024-11-26	2025-02-04	Gtangianu 2025-02-04	2025-02-04
C30000944	B	50-LP-002/B400-FGS-003 C10001467	Missing cable tag all along the route.	.		Gtangianu 2024-11-26	2025-03-03	Gtangianu 2025-03-03	2025-03-03
C30000945	B	50-LP-002/B400-FGS-003 C10001467	Missing all core identification tags both side.	.		Gtangianu 2024-11-26	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30000947	B	A-50000 C10002350	secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30000949	B	A-50000 C10002350	Various tag plates are missing inside the Water Treatment Package (A-50000).	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30001226	B	A-50000	Missing main description labels. To be installed (Fire alarm push button)		INSTALLED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001236	B	A-50000	PI-031, PI-033 to be tightened		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001240	B	A-50000	Label to be installed (AT-026)		IINSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001251	B	A-50000	Test report for F&G system to be provided (by SIA)		done - see attached	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06

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PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001243	A	A-50000	To be installed panel with dedicated holes (All terminal points)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001244	A	A-50000	Correct measure with panel installed to be verified (All terminal points)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001247	A	A-50000	Container and control panel to be cleaned inside (50-LP-001)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001249	A	A-50000	Wrong connection panel side, to be verified (P-50003A/B)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30000938	B	83016-CEL C10000536	Missing cable tags all along the route	.		Gtangianu 2024-11-26	2025-02-25	APolo 2025-02-25	2025-02-25
C30000939	B	83016-CEL C10000536	Missing all core identification tags both side	.		Gtangianu 2024-11-26	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30000942	B	84313-CEL C10000589	Missing all core identification tags both side.	.		Gtangianu 2024-11-26	2025-02-15	AAndreani 2025-02-15	2025-02-15
C30000943	B	84313-CEL C10000589	Missing cable tag all along the route. See attached photo.	.		Gtangianu 2024-11-26	2025-02-25	APolo 2025-02-25	2025-02-25
C30000946	B	A-50000 C10002349	Various tag plates are missing inside the Water Treatment Package (A-50000).	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17

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SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000948	B	A-50000 C10002349	secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.	.		Gtangianu 2024-11-26	2024-12-17	Ecarotenuto 2024-12-17	2024-12-17
C30001219	B	A-50000	Missing label (HHS-50003A/B_container electric heater)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001220	B	A-50000	Earthing to be fixed (AT-020C)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001221	B	A-50000	Missing labels (MFA, sounder, lights)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001227	B	A-50000	Inside panel to be installed ferrules on power cable side (50-LP-001)		installed	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001228	B	A-50000	All MCT's to be fixed and closed (50-LP-001)		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001229	B	A-50000	Earthing cable to be fixed properly inside panel (50-LP-001)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001230	B	A-50000	Cables to be fixed properly inside the cable tray of the panel (50-LP-001)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001232	B	A-50000	Plastic strips to be cut		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19

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SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001233	B	A-50000	Cables to be properly fixed in some points of the container		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001234	B	A-50000	Additional light to be added inside the container tank side, due to low visibility		Light has been moved in order to light better the area	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001235	B	A-50000	Missing traffolyte tag for all lamps		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001242	B	A-50000	Missing identification label (All terminal points)		Installed (see picture)	SLinari 2024-11-29	Vendor 2025-02-20	SLinari 2025-02-20	2025-02-20
C30001245	B	A-50000	Correct tag to be installed (now is installed MV-626 instead of SP-626)		DONE	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001246	B	A-50000	Missing cable tags RM side (50-LP-001 and A-50000)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19

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PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30000480	B	A-50000	Surface preparation activities complied with ISO 12944. Inspection records were satisfactorily completed, but physical inspection of the		Completed	SLinari 2024-10-28	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30000481	B	A-50000	Cable trays support fixed with pins inserted externally; PSC will put an epoxy fille (e.g. Sikaflex 291i) and painting (see Advisor Note n.		Activity done – see pictures	SLinari 2024-10-28	Vendor 2025-04-23	SLinari 2025-04-23	2025-04-23
C30001216	B	A-50000	Missing data nameplate (T-50006, T-50008)		INSTALLED	SLinari 2024-11-29	SLinari 2024-12-18	SLinari 2024-12-18	2024-12-18
C30001217	B	A-50000	Traffolyte tag missing (P-50002A/B_back wash pump)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001218	B	A-50000	Missing label (HFA-50001A/B_container air fan)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-06	SLinari 2025-02-06	2025-02-06
C30001222	B	A-50000	Flexible to be connected and missing tag (P-50004A/B_HP Pump)		installed	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001224	B	A-50000	Missing adhesive labels (A-50007A/B_water reverse osmosis units)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001231	B	A-50000	Missing TAG outside container		installed	SLinari 2024-11-29	SLinari 2025-01-28	SLinari 2025-01-28	2025-01-28
C30001237	B	A-50000	Labels to be installed (P-50009A/B_fresh water pump)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07

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SYSTEM 50 Fresh Water Systems

SUBSYSTEM 50-10 Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001238	B	A-50000	Labels to be installed (S-50004_softening filter)		INSTALLED	SLinari 2024-11-29	SLinari 2025-02-07	SLinari 2025-02-07	2025-02-07
C30001239	B	A-50000	Position to be clarified (NRV-653)		DONE	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30001250	B	A-50000	Wrong rotation, to be fixed (P-50009A/B)		FIXED	SLinari 2024-11-29	SLinari 2024-12-19	SLinari 2024-12-19	2024-12-19
C30004095	B	A-50000 C10002351	In the nameplate dimensions are 12192x2538x3140 mm; in document 1724000448-MAC-DAA-00005, these dimensions	.	Done	LNovaga 2025-02-24	Vendor 2025-04-23	SLinari 2025-04-23	2025-04-23
C30004096	B	A-50000 C10002351	The structure is welded, not bolted. update drawings.	.	In the drawing we have indicated the following because the structure of the	LNovaga 2025-02-24	Vendor 2025-04-23	SLinari 2025-04-23	2025-04-23
C30004097	B	A-50000 C10002351	Piping interface not completly reinstaded	.	Reinstatement completed	LNovaga 2025-02-24	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30
C30004098	B	A-50000 C10002351	The grounding system is not as specified. In the field there are two grounding lugs on the north side. Produce a mark up on drawing	.	RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal	LNovaga 2025-02-24	RDegliEsposti 2025-08-13	RDegliEsposti 2025-08-13	2025-08-13
C30004099	B	A-50000 C10002351	There is a little damage on north side door. See attached photo.	.		LNovaga 2025-02-24	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30004100	B	A-50000 C10002351	There are mechanical damage. Restore the paint with a touch up	.		LNovaga 2025-02-24	2025-05-06	LNovaga 2025-05-06	2025-05-06

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004101	B	A-50000 C10002351	Some items are not in the correct position (see attached) relative to the document 1724000448-MAC-DA-00005. Align the drawing if	.	The drawing nr: 1724000448-MAC-DA-0005 has been revised and re	LNovaga 2025-02-24	Vendor 2025-04-23	SLinari 2025-04-23	2025-04-23
C30004102	B	A-50000 C10002351	Tag S-50002B is not installed.	.		LNovaga 2025-02-24	2025-03-01	LNovaga 2025-03-01	2025-03-01
C30004103	B	A-50000 C10002351	Tag T-50003 is not installed.	.		LNovaga 2025-02-24	2025-03-01	LNovaga 2025-03-01	2025-03-01
C30004104	B	A-50000 C10002351	The top terminal point cover on the west side has not been fixed.	.		LNovaga 2025-02-24	2025-03-27	LNovaga 2025-03-27	2025-03-27
C30004105	B	A-50000 C10002351	the covers of the terminal points at the bottom on the west side are not installed.	.		LNovaga 2025-02-24	2025-04-23	LNovaga 2025-04-23	2025-04-23
C30004106	B	A-50000 C10002351	General cleaning of package, especially on roof.	.		LNovaga 2025-02-24	2025-04-15	LNovaga 2025-04-15	2025-04-15
C30004121	B	A-50000 C10002351	TP-008 is missing, to be installed.			SLinari 2025-02-25	2025-04-15	SLinari 2025-04-15	2025-04-15

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001590	B	50-10-TP-006 C10003270	Bolts of supports S64 have not been tightened yet. Isolator C-9 missing from all clamps C-1. Correct gap of support C-33 not yet achieved.	.		KAlbonetti 2024-12-09	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30001591	B	50-10-TP-006 C10003270	Vertical misalignment between line and package interconnecting flange of around 40 mm.	.		KAlbonetti 2024-12-09	2024-02-17	KAlbonetti 2024-02-17	2024-02-17
C30003519	B	50-10-TP-006 C10003270	Spool E is lenght 117 mm instead of 147 mm as marked in the isometric. See attached photo.	.		KAlbonetti 2025-02-04	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004012	B	50-10-TP-006 C10003271	The support PS-02122.1is not aligned and does not fully touch the structural support. See attached photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004015	B	50-10-TP-006 C10003271	The support PS-02124.4 is not aligned and does not fully touch the structural support that has a misalignment as in photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004016	B	50-10-TP-006 C10003271	The support PS-02048.2 is not aligned and does not fully touch the structural support. See attached photo.	.		LNovaga 2025-02-19	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30004295	B	50-10-TP-006 C10003272	Missing insulation from penetration T.O.S. EL. +30130 to joint 001-1-J4 for ongoing commissioning activities. See attached photo and	.	Insulation installed	LNovaga 2025-03-28	RDegliEsposti 2025-07-28	RDegliEsposti 2025-07-28	2025-07-28
C30004296	B	50-10-TP-006 C10003272	Missing the insulation pillow around the joint 001-1-J1 and portion of pipe not insulated (refer to punch C30004295)	.	Insulation installed	LNovaga 2025-03-28	RDegliEsposti 2025-07-25	RDegliEsposti 2025-07-25	2025-07-25
C30004297	B	50-10-TP-006 C10003272	Missing insulation sheet on water treatment side (see attached photo) and sealant between W2 and W3 on isometric 001	.		LNovaga 2025-03-28	2025-03-28	LNovaga 2025-03-28	2025-03-28

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 50 Fresh Water Systems
SUBSYSTEM 50-10 Water Desalination Package & Distribution

Miscellaneous

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004394	B	123A90-PML-COM-PRO-03042 C10004614	Following negative test results, an investigation has revealed that the water treatment package Tag A-50000 and the internal water treatment	An immediate solution to enable feeding of the electrolyser has been implemented: on-spec. Water produced by the water treatment	Closed with approval of CQ018	RDegliEsposti 2025-06-06	RDegliEsposti 2025-07-30	RDegliEsposti 2025-07-30	2025-07-30

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004097

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Piping interface not completly reinstaded

Name: Lorenzo Novaga

Date: 2025-02-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Reinstatement completed

Name: Raffaele Degli Esposti

Date: 2025-07-30

Signature:

5 - CLEARANCE CHECK

Completed.

Name: Raffaele Degli Esposti

Date: 2025-07-30

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-07-30

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004096

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The structure is welded, not bolted. update drawings.

Name: Lorenzo Novaga

Date: 2025-02-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

In the drawing we have indicated the following because the structure of the container is hooked by twist lock provided by Rosetti Marino whose base is welded to the surface of the deck. Punch list can be considered closed

Name: Vendor Crosswind

Date: 2025-04-23

Signature:

5 - CLEARANCE CHECK

Done

Name: Stefano Linari

Date: 2025-04-23

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-23

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004095

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

In the nameplate dimensions are 12192x2538x3140 mm; in document 1724000448-MAC-DAA-00005, these dimensions are shown as 12192x2438x2896 mm (excluding height jb).

Name: Lorenzo Novaga

Date: 2025-02-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Done

Name: Vendor Crosswind

Date: 2025-04-23

Signature:

5 - CLEARANCE CHECK

Vendor has confirmed that label installed is accepted with value indicated

Name: Stefano Linari

Date: 2025-04-23

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-23

Signature:


PSC S.p.A. Engineering & Contracting
Bovisio Masciago (MB) - Italy
PSC
www.pscengineering.com
EQUIPMENT
WATER TREATMENT PACKAGE
ITEM
A-50000
PROJECT
HOLLANDSE KUSTNOORD
WIND PARK PROJECT
YEAR OF CONSTR.
2024
OUTLET FLUID
FRESH WATER
WEIGHT
10500 kg
DIMENSIONS (LxWxH)
12192x2538x3140 mm
CE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004016

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003271	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The support PS-02048.2 is not aligned and does not fully touch the structural support. See attached photo.

Name: Lorenzo Novaga
Date: 2025-02-19
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

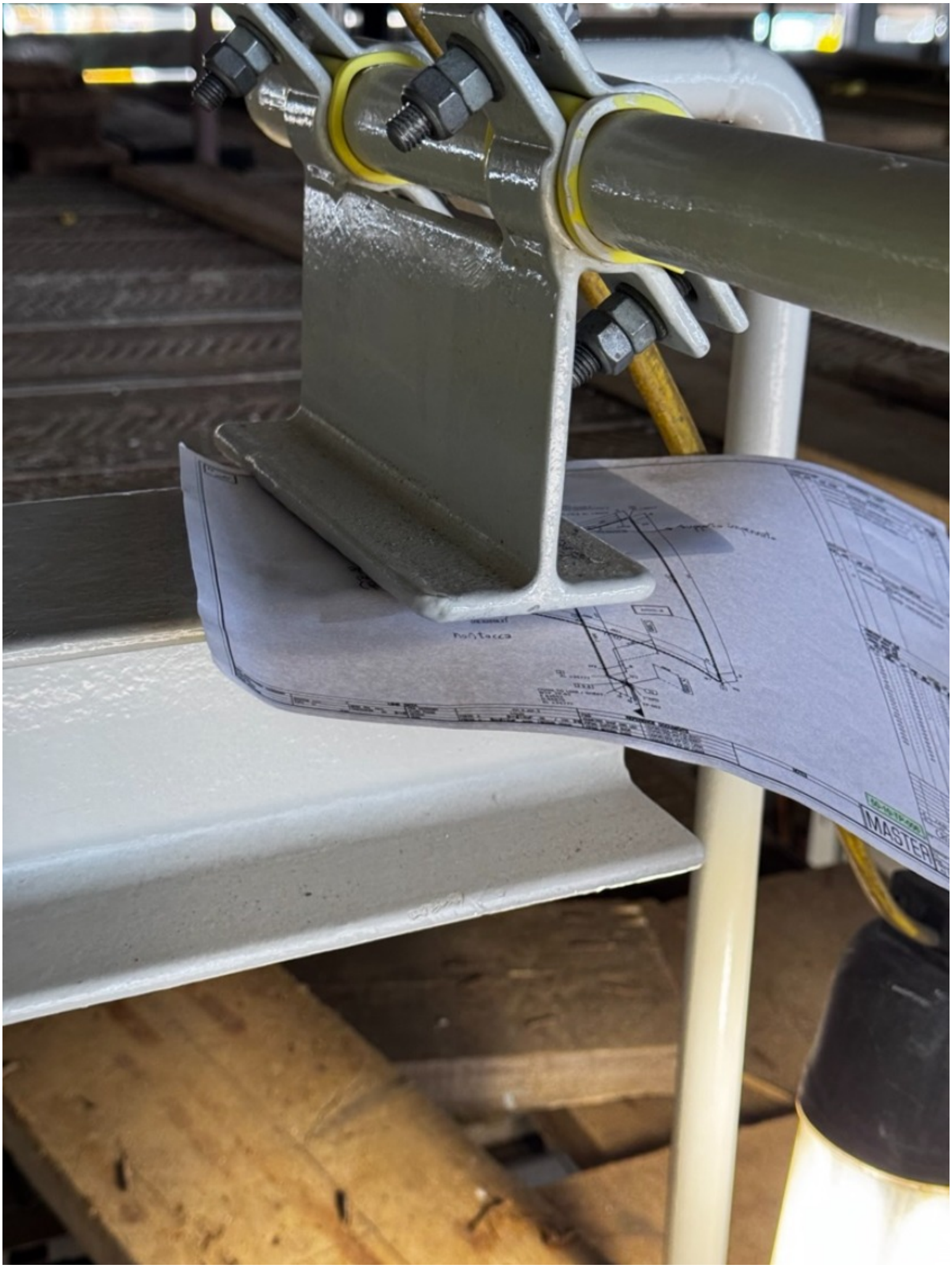
5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga
Date: 2025-02-21
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


MASTER

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004015

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003271	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The support PS-02124.4 is not aligned and does not fully touch the structural support that has a misalignment as in photo.

Name: Lorenzo Novaga

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:




STANLEY
0-42-130

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004012

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003271	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The support PS-02122.1is not aligned and does not fully touch the structural support. See attached photo.

Name: Lorenzo Novaga

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003519

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003270	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Spool E is lenght 117 mm instead of 147 mm as marked in the isometric.
See attached photo.

Name: Kangi Albonetti
Date: 2025-02-04
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-04
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

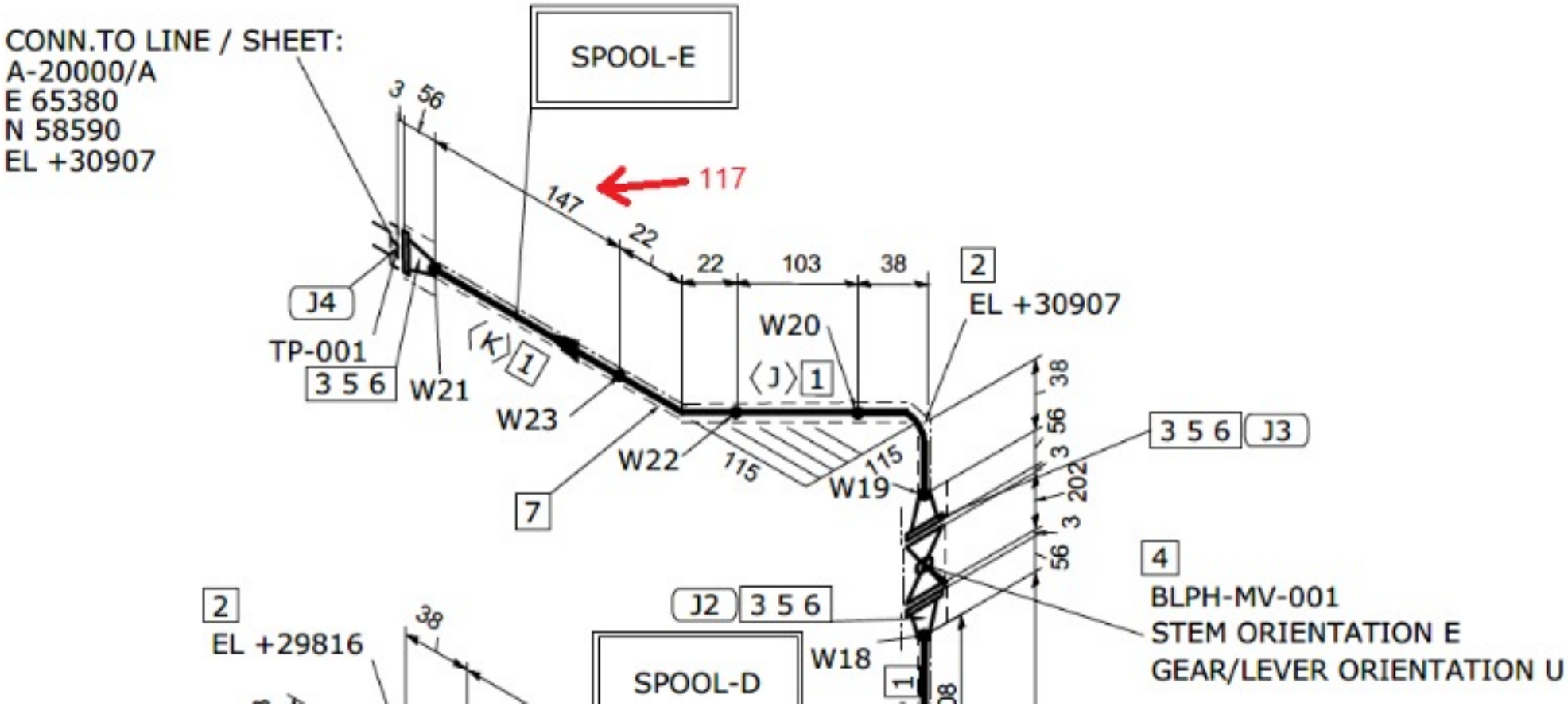
5 - CLEARANCE CHECK

Document marked-up.

Name: Lorenzo Novaga
Date: 2025-04-02
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


CONN.TO LINE / SHEET:
A-20000/A
E 65380
N 58590
EL +30907
SPOOL-E
117
3
56
147
22
22
103
38
2
EL +30907
J4
TP-001
3 5 6
W21
(K) 1
W23
W20
(J) 1
W22
115
115
W19
7
38
56
3
202
3
56
3 5 6 J3
4
BLPH-MV-001
STEM ORIENTATION E
GEAR/LEVER ORIENTATION U
J2 3 5 6
W18
SPOOL-D
2
EL +29816
38

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001591

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003270	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Vertical misalignment between line and package interconnecting flange of around 40 mm.

Name: Kangi Albonetti

Date: 2024-12-09

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2024-12-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Water treatment termination point has been modified by the Vendor.

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TP-006
TP-005
TP-002
TP-017

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001590

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003270	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Bolts of supports S64 have not been tightened yet. Isolator C-9 missing from all clamps C-1. Correct gap of support C-33 not yet achieved.

Name: Kangi Albonetti
Date: 2024-12-09
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2024-12-09
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Corrected

Name: Kangi Albonetti
Date: 2025-02-19
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001251

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Test report for F&G system to be provided (by SIA)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

done - see attached

Name VENDOR PSC

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

done - see attached

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

SIA® FIRE FIGHTING SYSTEMS

Uffici e Stabilimento:
Via Aldo Moro 6 - 2010 Pogliano M.se (MI) - Italy
Tel: +39 02 93548780 / + 39 02 93541837
Fax: +39 02 93549537 P.IVA: 06529110964
E-mail: info@sia-italia.com Web site: www.sia-italia.com

GIORNO N. / WEEK	15/11/2024 DI / No. Of	CLIENTE / CUSTOMER	PSC	ORDINE / PUCH.ORDER	2885/19/24/0	COMMESSA / JOB	C24032

RAPPORTO DI LAVORO GIORNALIERO

WORK REPORT

LOCALITA' / *SITE*: *Cantiere Rosetti Marino (RA) - Italy*

LAORO RICHESTO DAL SIG. / *SERVICE REQUESTED BY*: *Giovanni Benzi* TEL. / *PHONE*:

LAVORO SVOLTO DAL SIG. / *SERVICE EFFECTED BY*: *Pagani / Serra / Cepollaro* QUALIFICA / *QUALIFICATION*:

ORE DI LAVORO - WORKING HOURS

VIAGGIO ANDATA / *OUTWARD JOURNEY*					PRESENZA LAVORO / *IN SERVICE*				VIAGGIO RITORNO / *RETURN JOURNEY*			FIRMA / *SIGNATURE*

RAPPORTO SUL LAVORO SVOLTO

WORK REPORT

Installation of the SIA 5319 Hydrogen and Smoke Detection System:

- *Installation of the control unit and connection;*
- *Installation 3 smoke detectors and connection;*
- *Installation of 3 hydrogen detectors and connection;*
- *Installation of 1 button, mounted inside at customer's request, and connection;*
- *installation of sirens and flashing totems.*

Functional check with the customer and acceptance.

Successful result, the system is left operating.

CUSTOMER'S SIGNATURE:

SIA'S SIGNATURE:

S.I.A. Safety Industrial Applications S.r.l.
Via A. Moro, 6 - 20005 Pogliano Milanese (MI)
Tel. +39 02 35909911 - Fax +39 02 93541837
C.F./P.IVA 06529110964

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001250

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Wrong rotation, to be fixed (P-50009A/B)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001249

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Wrong connection panel side, to be verified (P-50003A/B)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001248

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

PT/TT : Model / Manufacturer Fischer doesn't work, wiring to be modified inside control panel

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature




-.00
PRESSURE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001247

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Container and control panel to be cleaned inside (50-LP-001)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001246

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing cable tags RM side (50-LP-001 and A-50000)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001245

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Correct tag to be installed (now is installed MV-626 instead of SP-626)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


SP-626

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001244

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Correct measure with panel installed to be verified (All terminal points)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001243

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

To be installed panel with dedicated holes (All terminal points)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001242

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing identification label (All terminal points)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Installed (see picture)

Name Vendor Crosswind

Date 2025-02-20

Signature

5 - CLEARANCE CHECK

Completed.

Name Stefano Linari

Date 2025-02-20

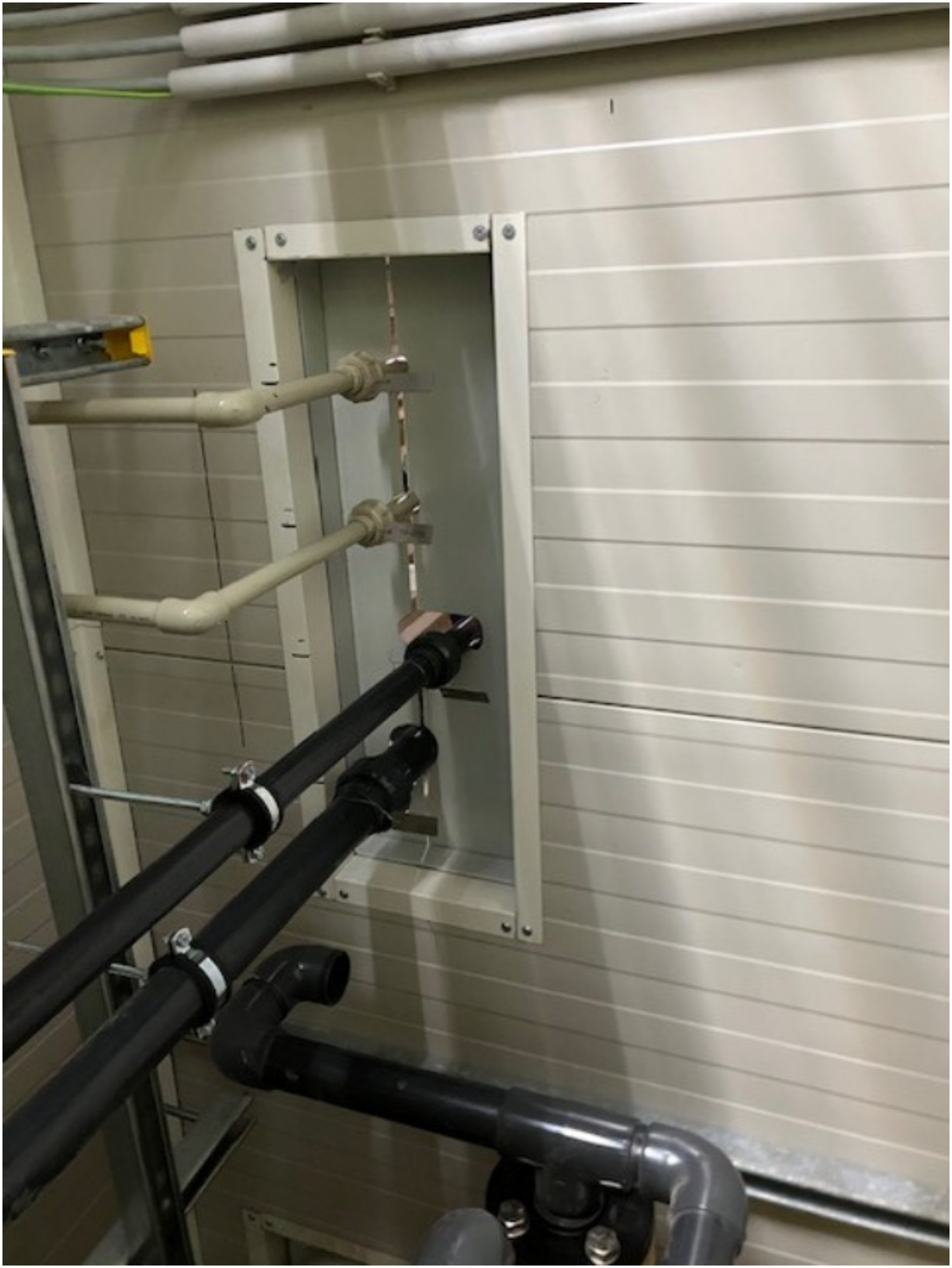
Signature

6- CLEARANCE APPROVAL

Name

Date 2025-02-20

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001241

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Instrument non accessible, to be moved (50-PT-050, 50-PT-051)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature




-.00
PRESSURE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001240

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Label to be installed (AT-026)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

IINSTALLED

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


50-AT-026

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001239

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Position to be clarified (NRV-653)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001238

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Labels to be installed (S-50004_softening filter)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-07

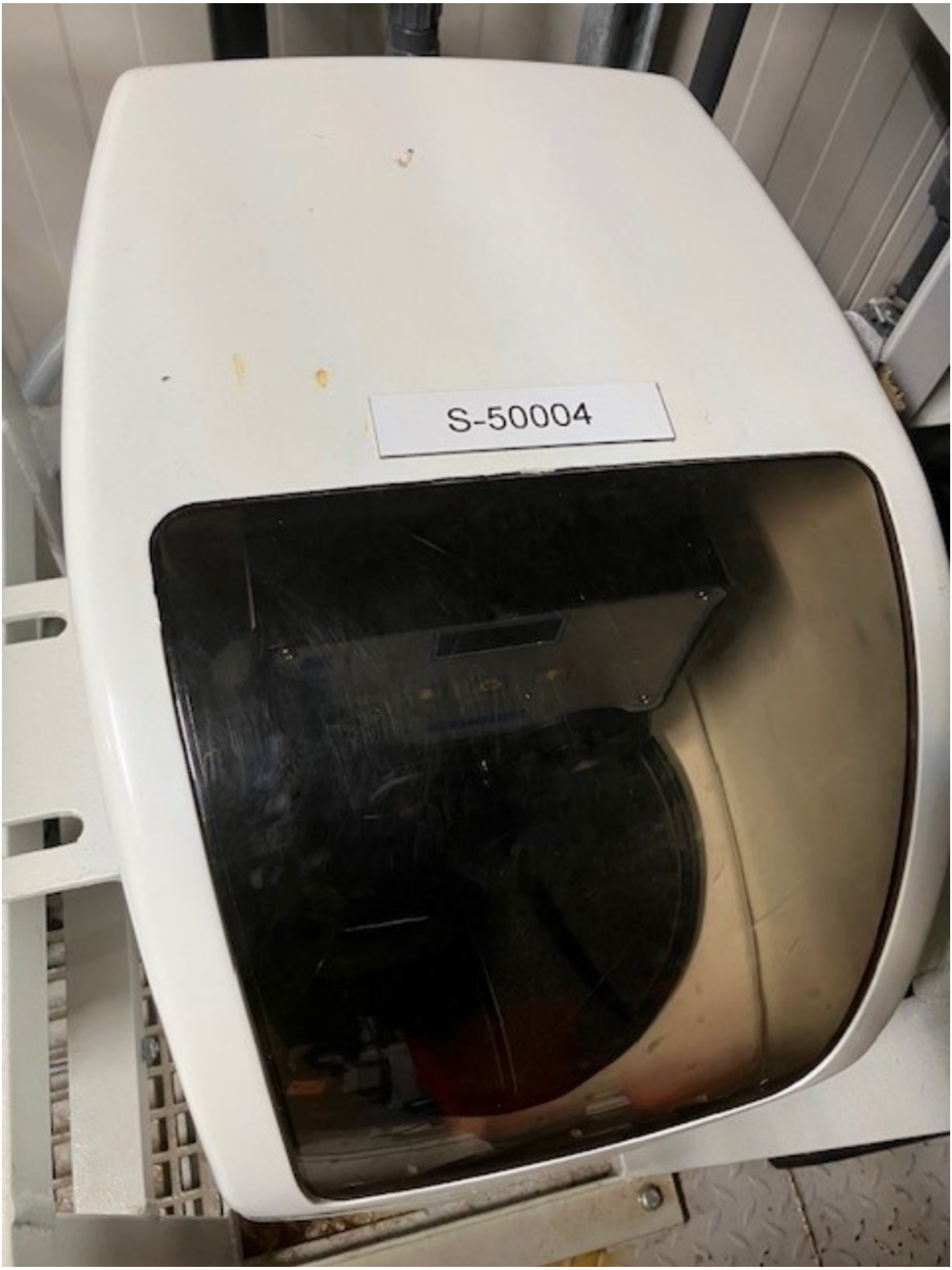
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


S-50004

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001237

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Labels to be installed (P-50009A/B_fresh water pump)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


GRUNDFOS
P-50009B
P-50009A

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001236

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

PI-031, PI-033 to be tightened

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001235

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing traffolyte tag for all lamps

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-07

Signature

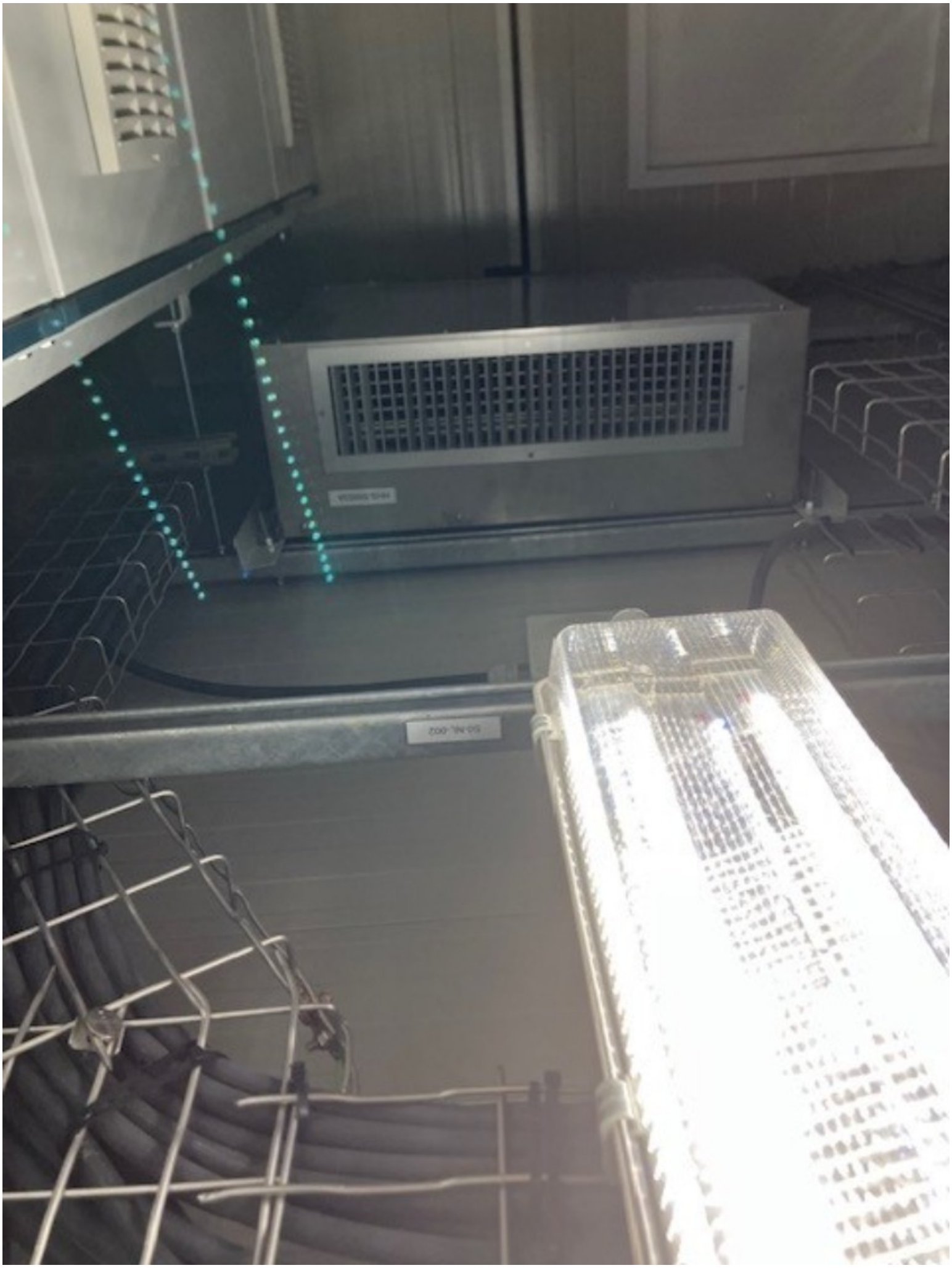
6- CLEARANCE APPROVAL

Name

Date

Signature


60-NL-001




50-NL-003

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001234

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Additional light to be added inside the container tank side, due to low visibility

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Light has been moved in order to light better the area

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

Light has been moved in order to light better the area

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001233

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Cables to be properly fixed in some points of the container

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001232

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Plastic strips to be cut

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001231

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing TAG outside container

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed

Name VENDOR PSC

Date 2025-01-28

Signature

5 - CLEARANCE CHECK

installed

Name Stefano Linari

Date 2025-01-28

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


APPROVED FOR TRANSPORT
UNDER CUSTOMS SEAL
CSC SAFETY APPROVAL
TIMBER COMPONENT TREATMENT
EQUIPMENT
WATER TREATMENT PACKAGE
ITEM
A-50000
PROJECT
HOLLANDSE KUSTNOORD
WIND PARK PROJECT
YEAR OF CONSTR.
2024
OUTLET FLUID
FRESH WATER
WEIGHT
CE


APPROVED FOR TRANSPORT
UNDER CUSTOMS SEAL
CSC SAFETY APPROVAL
TIMBER COMPONENT TREATMENT
EQUIPMENT
WATER TREATMENT PACKAGE
ITEM
A-50000
PROJECT
HOLLANDSE KUSTNOORD
WIND PARK PROJECT
YEAR OF CONSTR.
2024
OUTLET FLUID
FRESH WATER
WEIGHT
CE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001230

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Cables to be fixed properly inside the cable tray of the panel (50-LP-001)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

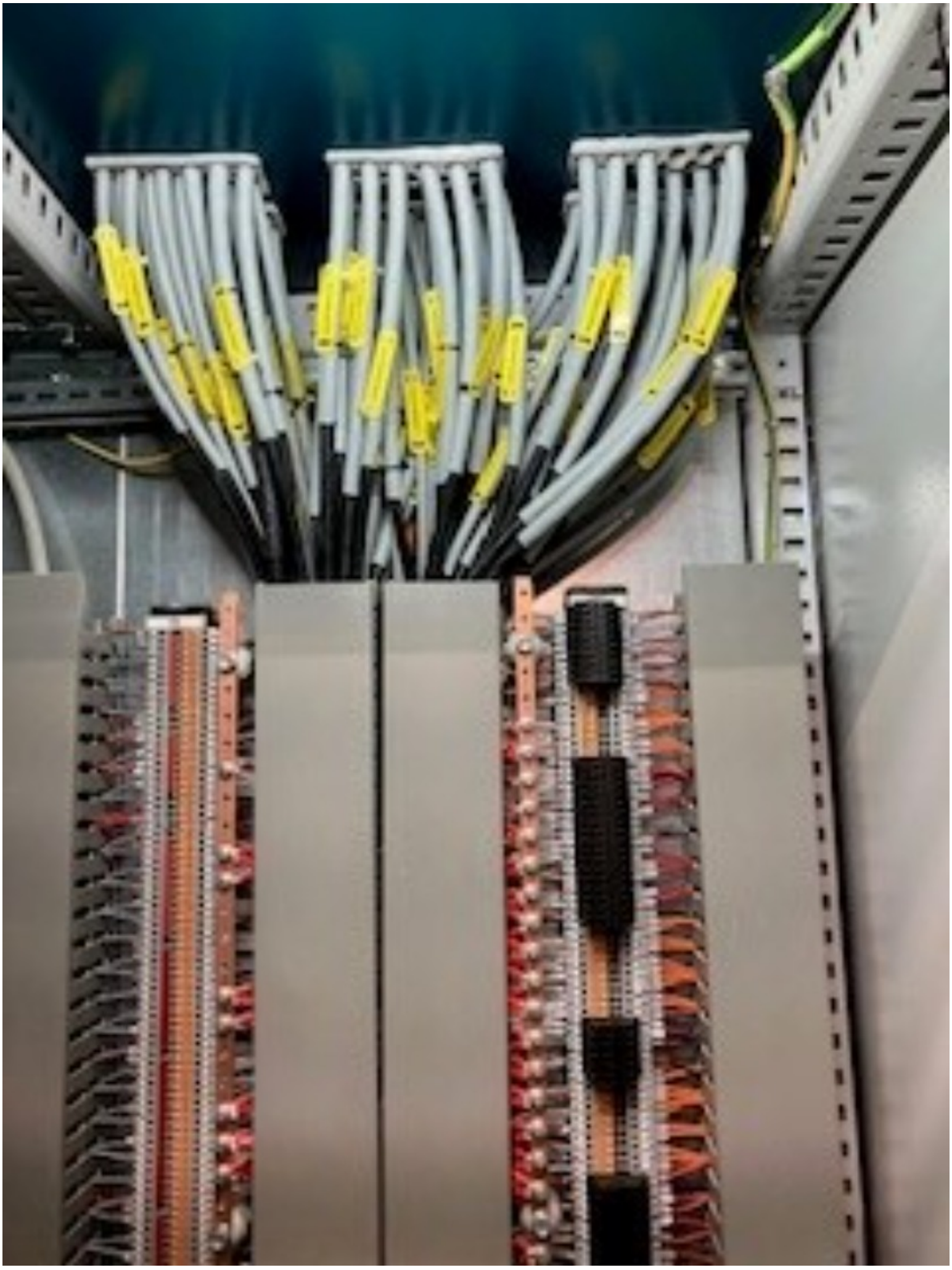
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001229

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Earthing cable to be fixed properly inside panel (50-LP-001)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001228

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

All MCT's to be fixed and closed (50-LP-001)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

DONE

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

DONE

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001227

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Inside panel to be installed ferrules on power cable side (50-LP-001)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

installed

Name Stefano Linari

Date 2025-02-07

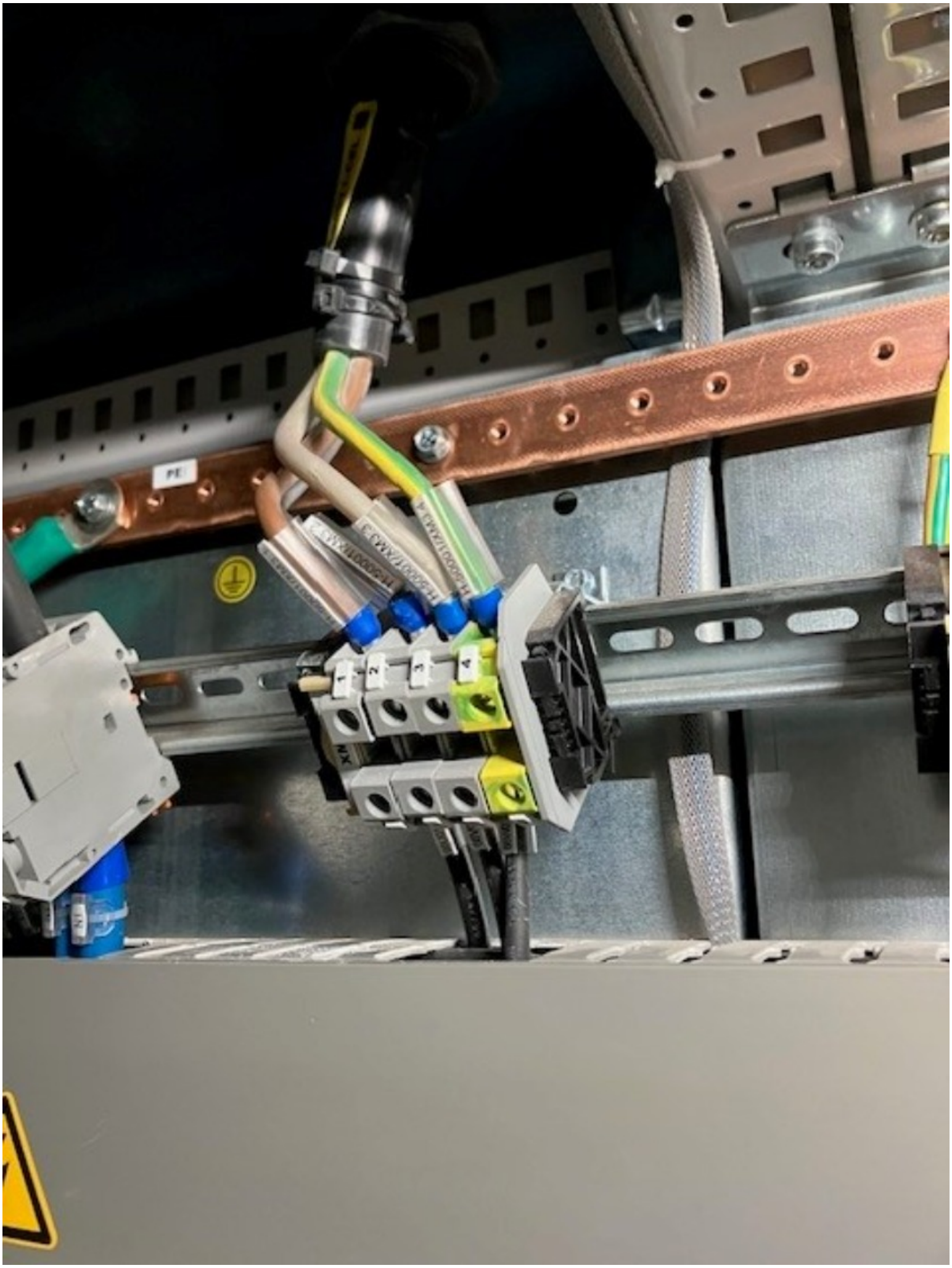
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


PE
N

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001226

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing main description labels. To be installed (Fire alarm push button)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001225

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

PSV-039, PSV-036 to be reversed

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

ACTIVITY DONE

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

ACTIVITY DONE

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001224

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing adhesive labels (A-50007A/B_water reverse osmosis units)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-07

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


A-50007A
A-50007B

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001223

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Instrumental
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Instrument damaged (50-HS-02)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED AND TESTED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED AND TESTED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001222

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Flexible to be connected and missing tag (P-50004A/B_HP Pump)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

installed

Name VENDOR PSC

Date 2025-02-07

Signature

5 - CLEARANCE CHECK

installed

Name Stefano Linari

Date 2025-02-07

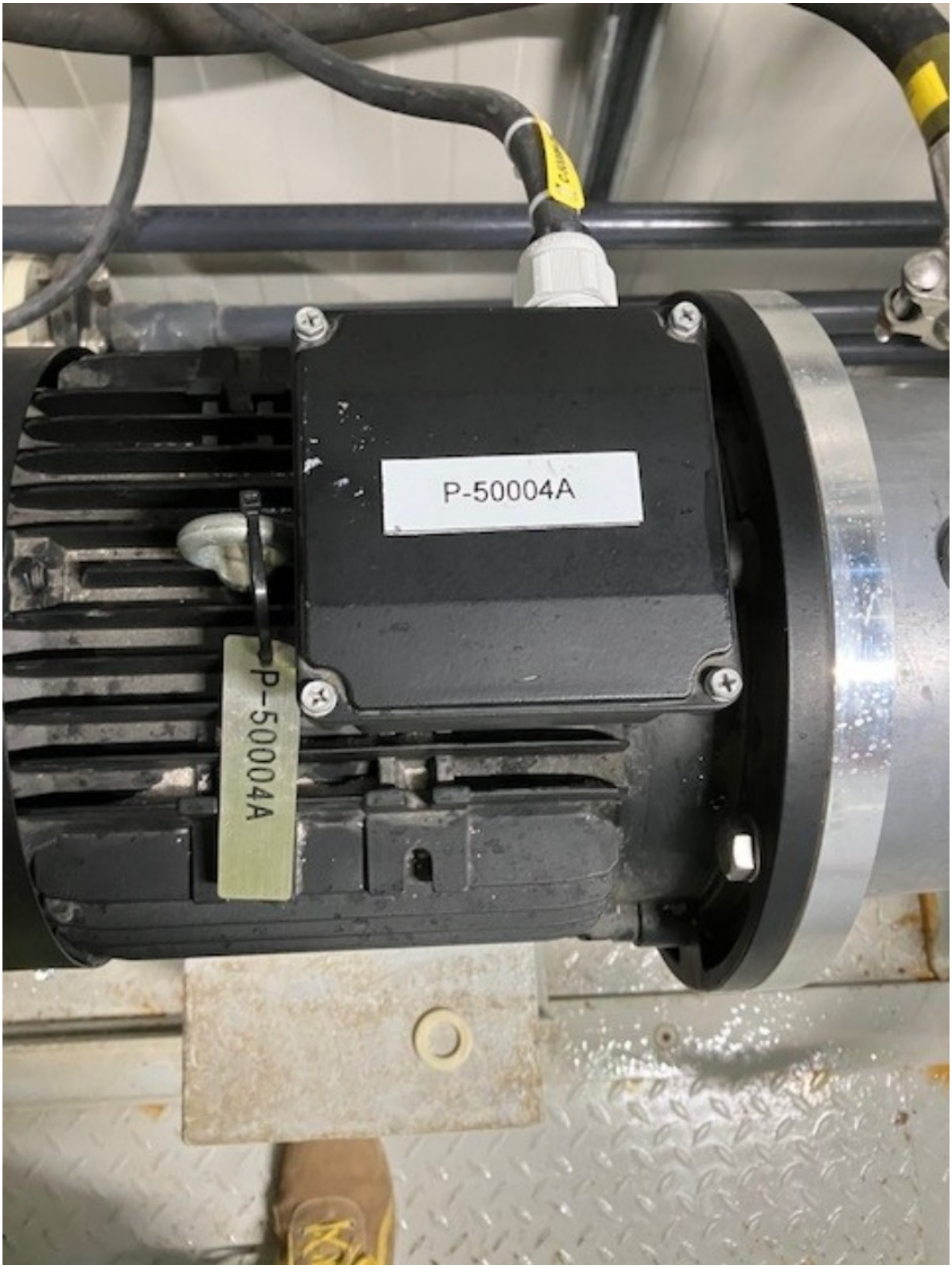
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


P-50004A
P-50004A


P-50004B



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001221

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing labels (MFA, sounder, lights)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


950-XL-05201

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001220

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Earthing to be fixed (AT-020C)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

FIXED

Name VENDOR PSC

Date 2024-12-19

Signature

5 - CLEARANCE CHECK

FIXED

Name Stefano Linari

Date 2024-12-19

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001219

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Electrical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing label (HHS-50003A/B_container electric heater)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature




HHS-50003A

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001218

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing label (HFA-50001A/B_container air fan)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature




HFA-50001B

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001217

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Traffolyte tag missing (P-50002A/B_back wash pump)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2025-02-06

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2025-02-06

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


P-50002A
P-50002A


P-50002B
P-50002B

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001216

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing data nameplate (T-50006, T-50008)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-11-29
3.5 Action by		Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

INSTALLED

Name VENDOR PSC

Date 2024-12-18

Signature

5 - CLEARANCE CHECK

INSTALLED

Name Stefano Linari

Date 2024-12-18

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000958

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004348	1.4 Discipline	Telecom
1.2 Item	50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The cable termination is not installed in accordance with Electrical Typical Installation Details. see 123A90-DDL-EL-DD-20090 sh.8 / 29.

Name: Alessio Polo
Date: 2024-11-27
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Eleonora Carotenuto
Date: 2025-01-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000949

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002350	1.4 Discipline	Instrumental
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Various tag plates are missing inside the Water Treatment Package (A-50000).

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

duplicate point- Refer to C30000946

Name: Eleonora Carotenuto
Date: 2024-12-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000948

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002349	1.4 Discipline	Electrical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto
Date: 2024-12-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000947

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002350	1.4 Discipline	Instrumental
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

secondary earthing system of cable trays, instrument, ligthing to be complete prior energization.

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto
Date: 2024-12-17
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000946

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002349	1.4 Discipline	Electrical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Various tag plates are missing inside the Water Treatment Package (A-50000).

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Duplicate point. Refer to PL:
C30001218
C30001219
C30001221
C30001224
C30001226
C30001237
C30001238
C30001240
C30001242

Name: Eleonora Carotenuto

Date: 2024-12-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000945

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001467	1.4 Discipline	Instrumental
1.2 Item	50-LP-002/B400-FGS-003	CONFIRMED GAS ALARM / MARSHALLING PCS	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing all core identification tags both side.

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

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

C30000944

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001467	1.4 Discipline	Instrumental
1.2 Item	50-LP-002/B400-FGS-003	CONFIRMED GAS ALARM / MARSHALLING PCS	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tag all along the route.

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-03-03
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000943

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000589	1.4 Discipline	Electrical
1.2 Item	84313-CEL	AC UPS - PAS DB / UCP - Water Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tag all along the route.

See attached photo.

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

84313-CEL
84315-CEL
84304-CEL
84301-CEL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000942

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000589	1.4 Discipline	Electrical
1.2 Item	84313-CEL		AC UPS - PAS DB / UCP - Water Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Missing all core identification tags both side.

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000939

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000536	1.4 Discipline	Electrical
1.2 Item	83016-CEL	LV Switchgear / Water Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing all core identification tags both side

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000938

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000536	1.4 Discipline	Electrical
1.2 Item	83016-CEL	LV Switchgear / Water Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tags all along the route

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000935

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004541	1.4 Discipline	Instrumental
1.2 Item	C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Cable needs to be better dressed inside the Package (A-50000 Water treatment) See attached photo.

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Cable is properly dressed.

Name: Giovanni Tangianu

Date: 2025-02-04

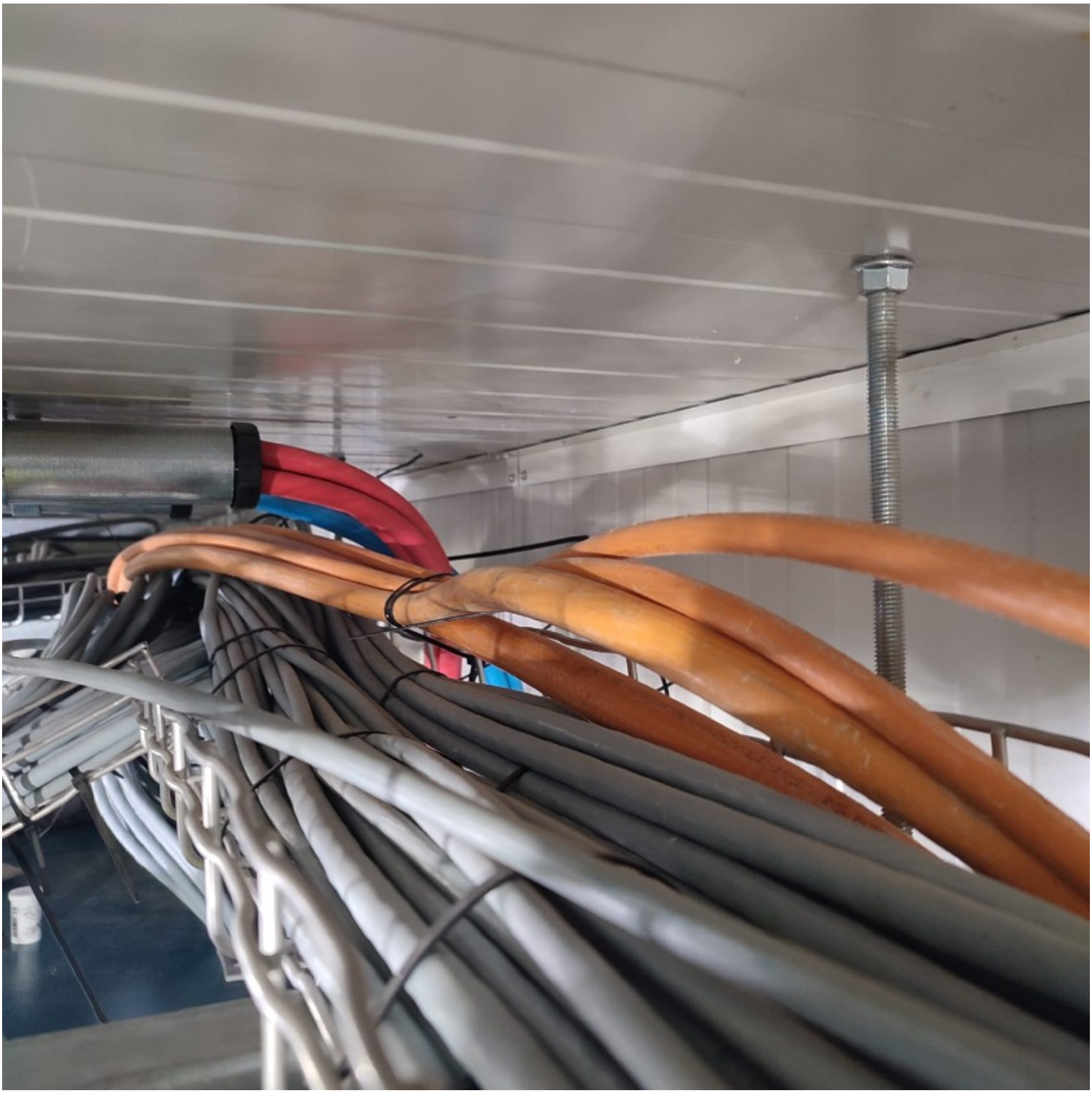
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000934

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004541	1.4 Discipline	Instrumental
1.2 Item	C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tag all along the route.

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000933

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004541	1.4 Discipline	Instrumental
1.2 Item	C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Shield not connected side B400-SIS-001

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-31

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000932

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004541	1.4 Discipline	Instrumental
1.2 Item	C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing all core identification tags both side.

Name: Giovanni Tangianu

Date: 2024-11-26

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

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

C30000931

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001450	1.4 Discipline	Instrumental
1.2 Item	C-50-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing all core identification tags both side

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

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

C30000930

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001450	1.4 Discipline	Instrumental
1.2 Item	C-50-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tags all along the route.

Name: Giovanni Tangianu
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-02-04
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000926

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004348	1.4 Discipline	Telecom
1.2 Item	50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing SS cable tag on MCT.

Name: Alessio Polo
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-31
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000925

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004348	1.4 Discipline	Telecom
1.2 Item	50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing cable tag , cabinet input A-50000.

Name: Alessio Polo
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date: 2025-03-10
Signature:

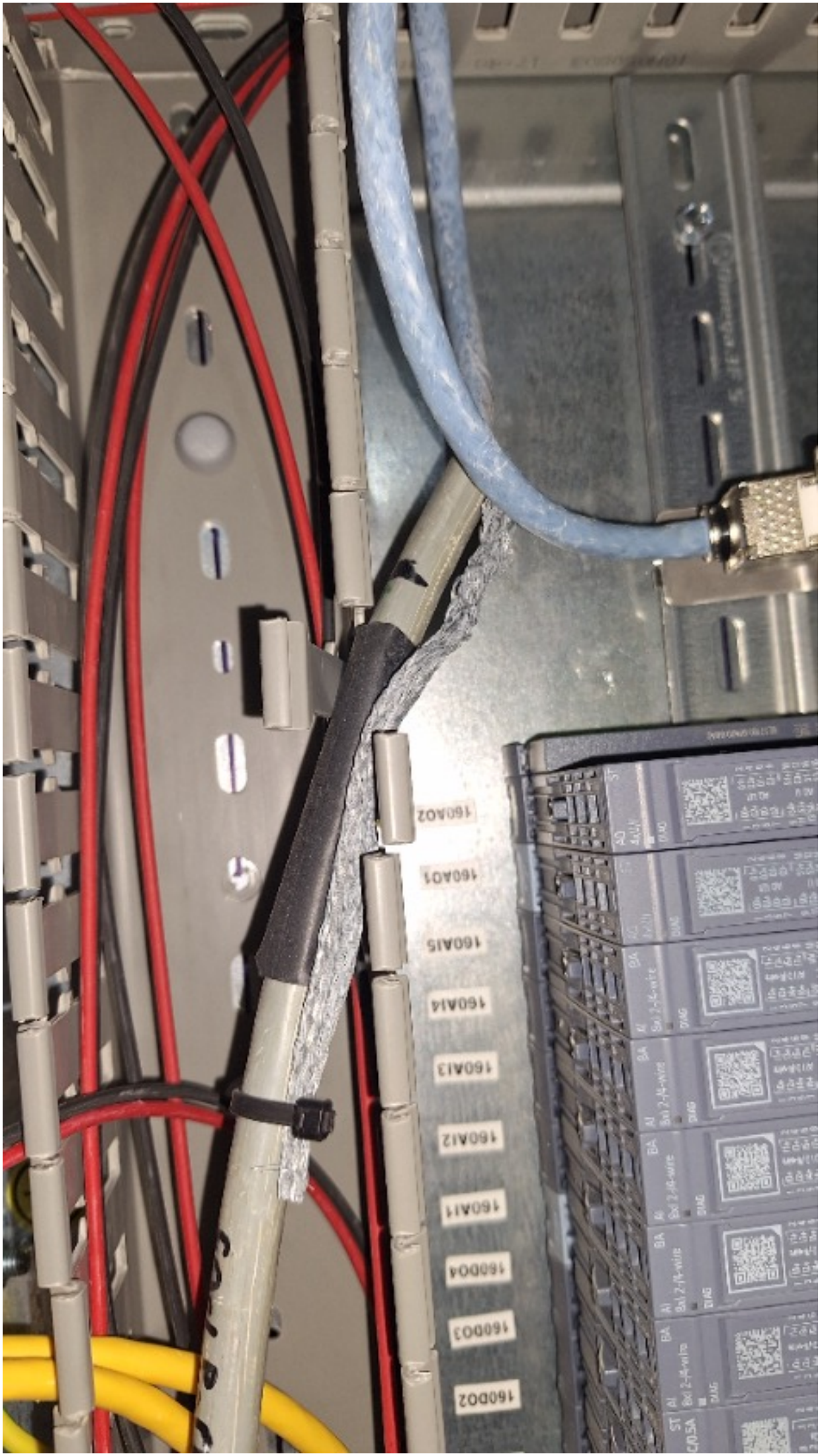
5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-03-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-10
Signature:


160AO2
160AO1
160AI5
160AI4
160AI3
160AI2
160AI1
160DO4
160DO3
160DO2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000924

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004348	1.4 Discipline	Telecom
1.2 Item	50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.

Name: Alessio Polo
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

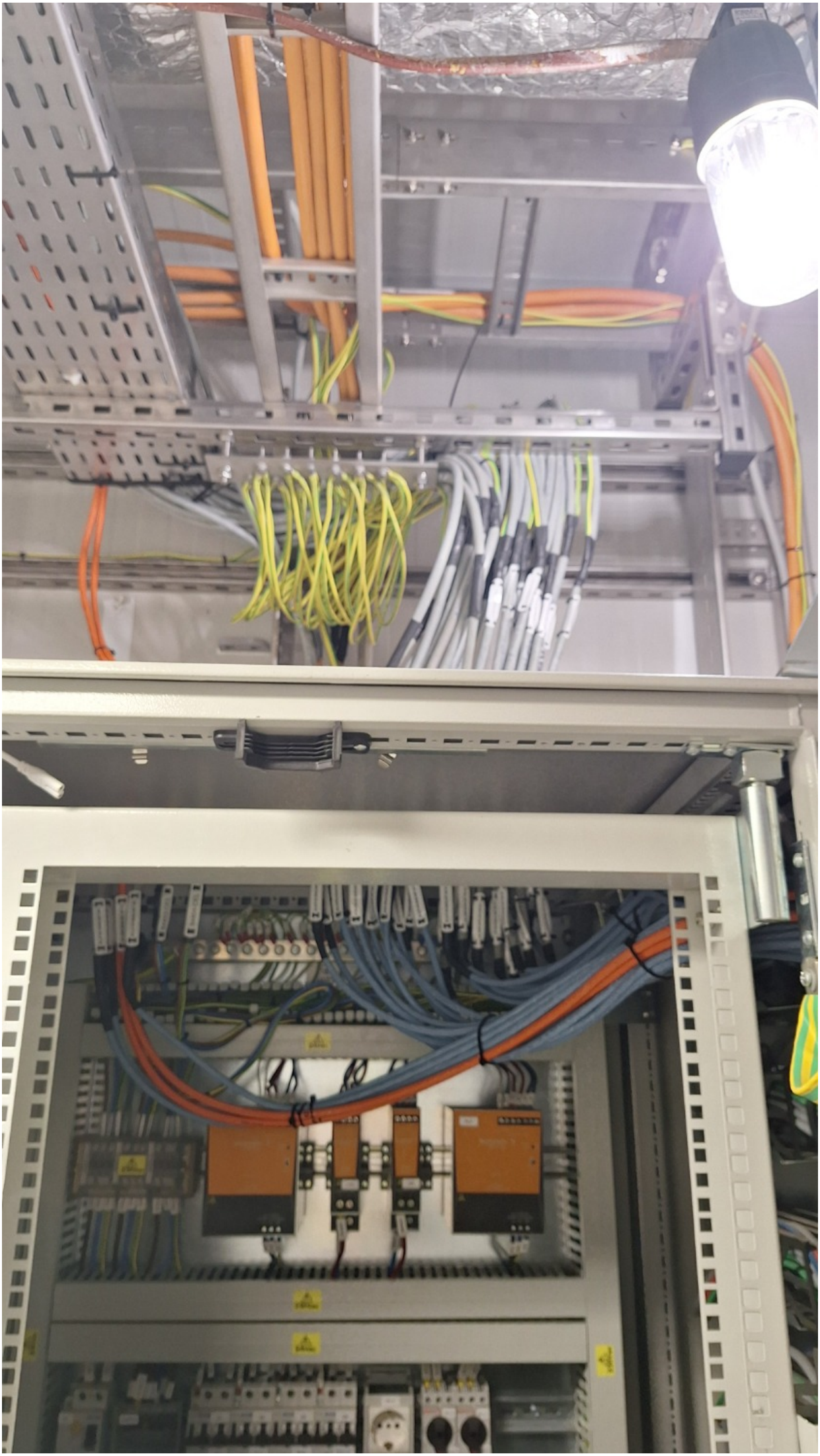
DONE

Name: Alessio Polo
Date: 2025-02-04
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000923

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004348	1.4 Discipline	Telecom
1.2 Item	50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The copper conductor of the cable armor must be individually connected to the earthing bar. See 123A90-DDL-EL-DD-20090.

Name: Alessio Polo
Date: 2024-11-26
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2024-11-26
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

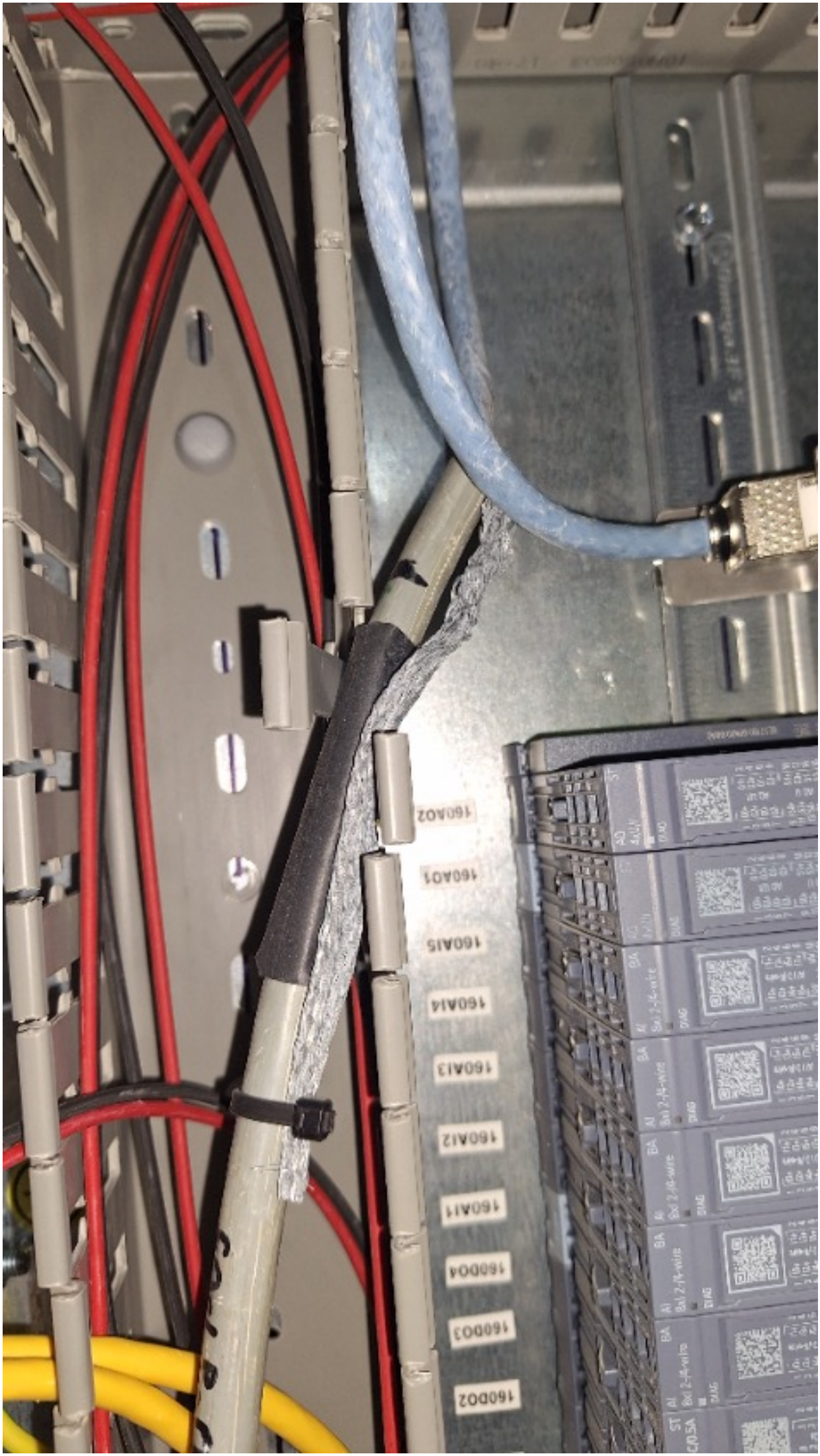
5 - CLEARANCE CHECK

Done .

Name: Giovanni Tangianu
Date: 2025-01-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


160AO2
160AO1
160AI5
160AI4
160AI3
160AI2
160AI1
160DO4
160DO3
160DO2

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000481

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Cable trays support fixed with pins inserted externally; PSC will put an epoxy fille (e.g. Sikaflex 291i) and painting (see Advisor Note n. 123A90-AUR-QA-VDR-006_1)

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-28
3.5 Action by	VND Vendor	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Activity done – see pictures

Name Vendor Crosswind

Date 2025-04-23

Signature

5 - CLEARANCE CHECK

Activity done – see pictures

Name Stefano Linari

Date 2025-04-23

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-04-23

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000480

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task		1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Surface preparation activities complied with ISO 12944. Inspection records were satisfactorily completed, but physical inspection of the container showed some issues:
- door seals contaminated during painting activities+
- visible welding spatters painted over.

Corrective actions are required to address issues identified during the physical inspection of the container, including cleaning contaminated seals and removing welding spatters.

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2024-10-28
3.5 Action by	RM_CONSTR RM	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

Completed

Name Raffaele Degli Esposti

Date 2025-07-30

Signature

5 - CLEARANCE CHECK

Completed.

Name Raffaele Degli Esposti

Date 2025-07-30

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-07-30

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004394

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004614	1.4 Discipline	Miscellaneous
1.2 Item	123A90-PML-COM-PRO-03042		OTP - Sea Water Intake and Fresh Water Treatment Systems
1.3 Subsystem	50-10		Water Desalination Package & Distribution

2 - OBSERVATION

Following negative test results, an investigation has revealed that the water treatment package Tag A-50000 and the internal water treatment system of the ELOGEN electrolyser (CPI) are not properly interfacing with each other.

Name: RAFFAELE DEGLI ESPOSTI
Date: 06/06/2025
Signature:

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal: An immediate solution to enable feeding of the electrolyser has been implemented: on-spec. Water produced by the water treatment package A-50000 is being supplied to the electroliser via an external storage tank.
However, a permanent and coordinated solution must be identified to resolve the integration issue between the water treatment package and the electrolyser's internal system. A CW / ROS joint process design study shall be carried out to ensure proper system interfacing.

3.2 Material required:

3.3 Priority: B PL B

3.4 Activity code: COMM Commissioning

3.5 Action by: ENG Engineering

Name: Raffaele Degli Esposti
Date: 2025-06-06
Signature:

4 - PERFORMED ACTION

Closed with approval of CQ018

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

5 - CLEARANCE CHECK

Completed.

Name: Raffaele Degli Esposti
Date: 2025-07-30
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-30
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004297

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003272	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing insulation sheet on water treatment side (see attached photo) and sealant between W2 and W3 on isometric 001

Name: Lorenzo Novaga

Date: 2025-03-28

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga

Date: 2025-03-28

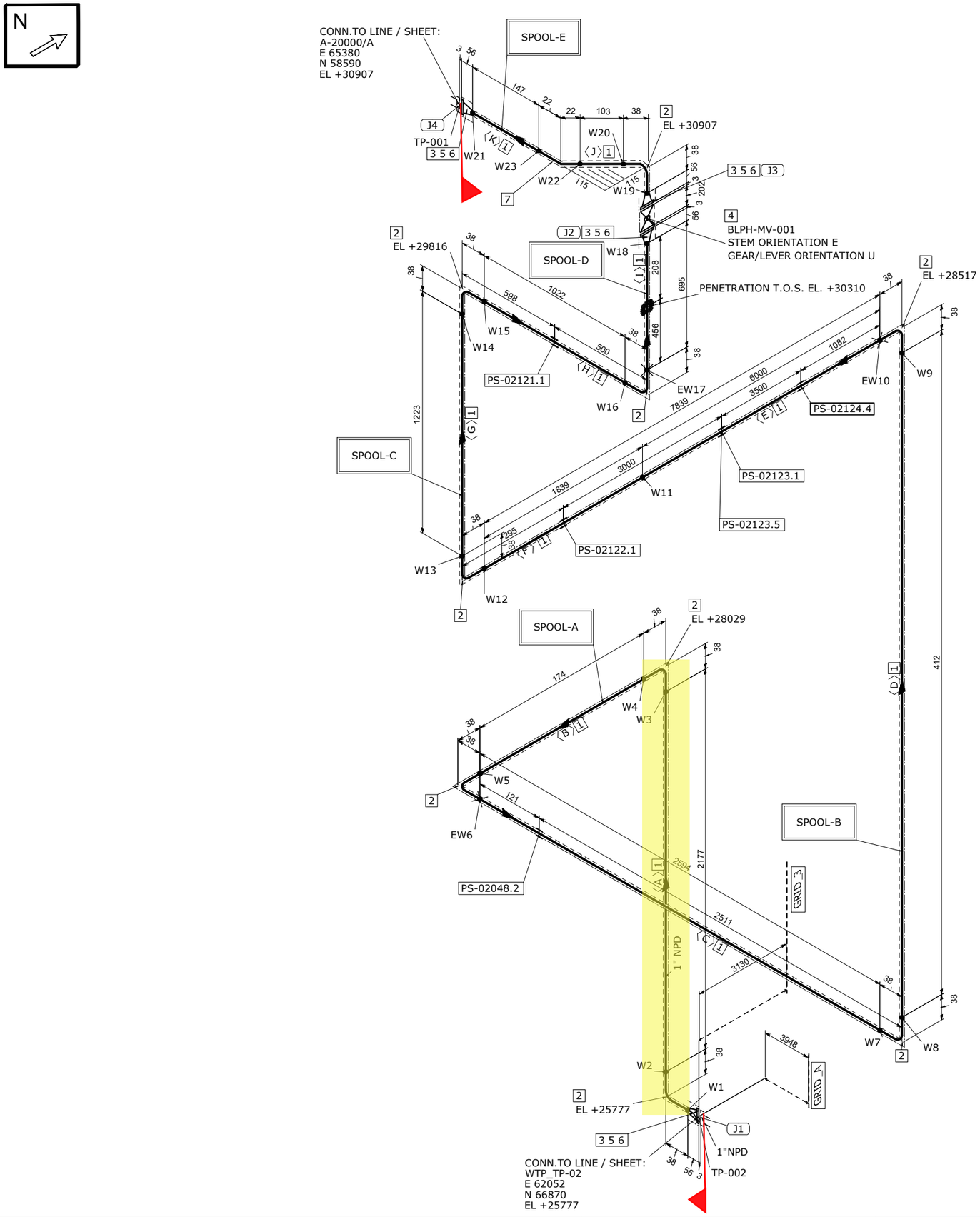
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

50-10-TP-006

MASTER

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00001 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]	
HEAT TRACING	Yes			TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM	Water

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004296

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003272	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing the insulation pillow around the joint 001-1-J1 and portion of pipe not insulated (refer to punch C30004295)

Name: Lorenzo Novaga
Date: 2025-03-28
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Insulation installed

Name: Raffaele Degli Esposti
Date: 2025-07-25
Signature:

5 - CLEARANCE CHECK

Completed.

Name: Raffaele Degli Esposti
Date: 2025-07-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-25
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004295

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003272	1.4 Discipline	Piping
1.2 Item	50-10-TP-006	Test Pack 50-10-TP-006	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Missing insulation from penetration T.O.S. EL. +30130 to joint 001-1-J4 for ongoing commissioning activities. See attached photo and isometric.

Name: Lorenzo Novaga
Date: 2025-03-28
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Insulation installed

Name: Raffaele Degli Esposti
Date: 2025-07-28
Signature:

5 - CLEARANCE CHECK

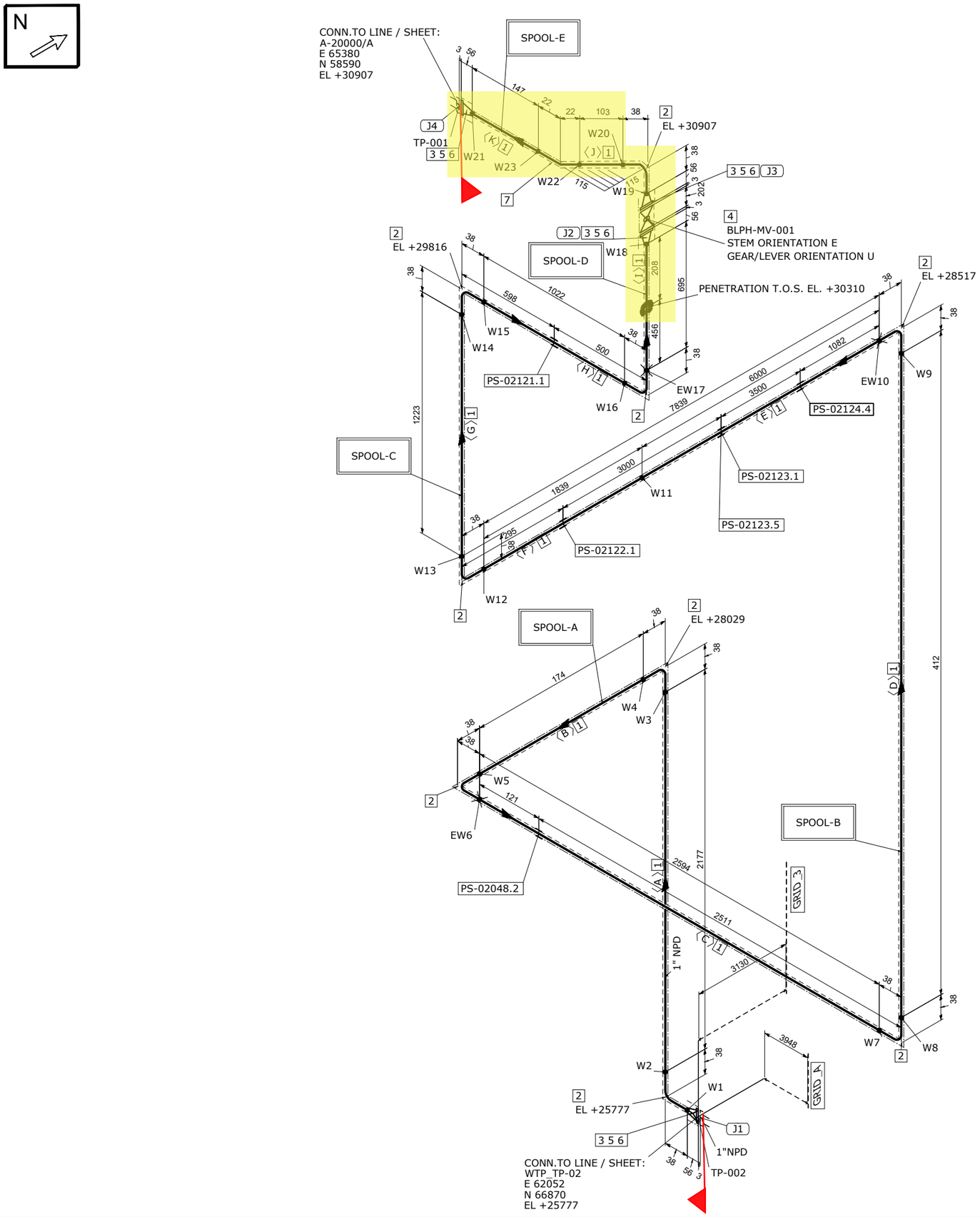
Completed.

Name: Raffaele Degli Esposti
Date: 2025-07-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-29
Signature:


FORDS ENGINEERING
FLANGE TAG
FLANGE TESTED
SYSTEM
LINE N°
JOINT N°
DATE
TORQUED
TENSIONED
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

50-10-TP-006

MASTER

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00001 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]	
HEAT TRACING	Yes			TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM	Water

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004121

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	CZX01M	1.4 Discipline	Mechanical
1.2 Item	A-50000		Water Treatment Package	
1.3 Subsystem	50-10		Water Desalination Package & Distribution	

2 - OBSERVATION

TP-008 is missing, to be installed.

Name

Date

Signature

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Stefano Linari
3.4 Activity code	FAT factory acceptance test	Date	2025-02-25
3.5 Action by	RM_CONSTR RM	Signature	--- Proverlis --- Duplicata issued from database information Signature is on original form

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name

Date 2025-04-15

Signature

5 - CLEARANCE CHECK

Done

Name Stefano Linari

Date 2025-04-15

Signature

6- CLEARANCE APPROVAL

Name

Date 2025-04-15

Signature

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004106

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

General cleaning of package, especially on roof.

Name: Lorenzo Novaga

Date: 2025-02-24

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:

Date: 2025-04-15

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-15

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-15

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004105

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

the covers of the terminal points at the bottom on the west side are not installed.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga
Date: 2025-04-23
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:




50-TT-001
TT-001
A4
50-TT-002
TT-002



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004104

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The top terminal point cover on the west side has not been fixed.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date: 2025-03-27
Signature:

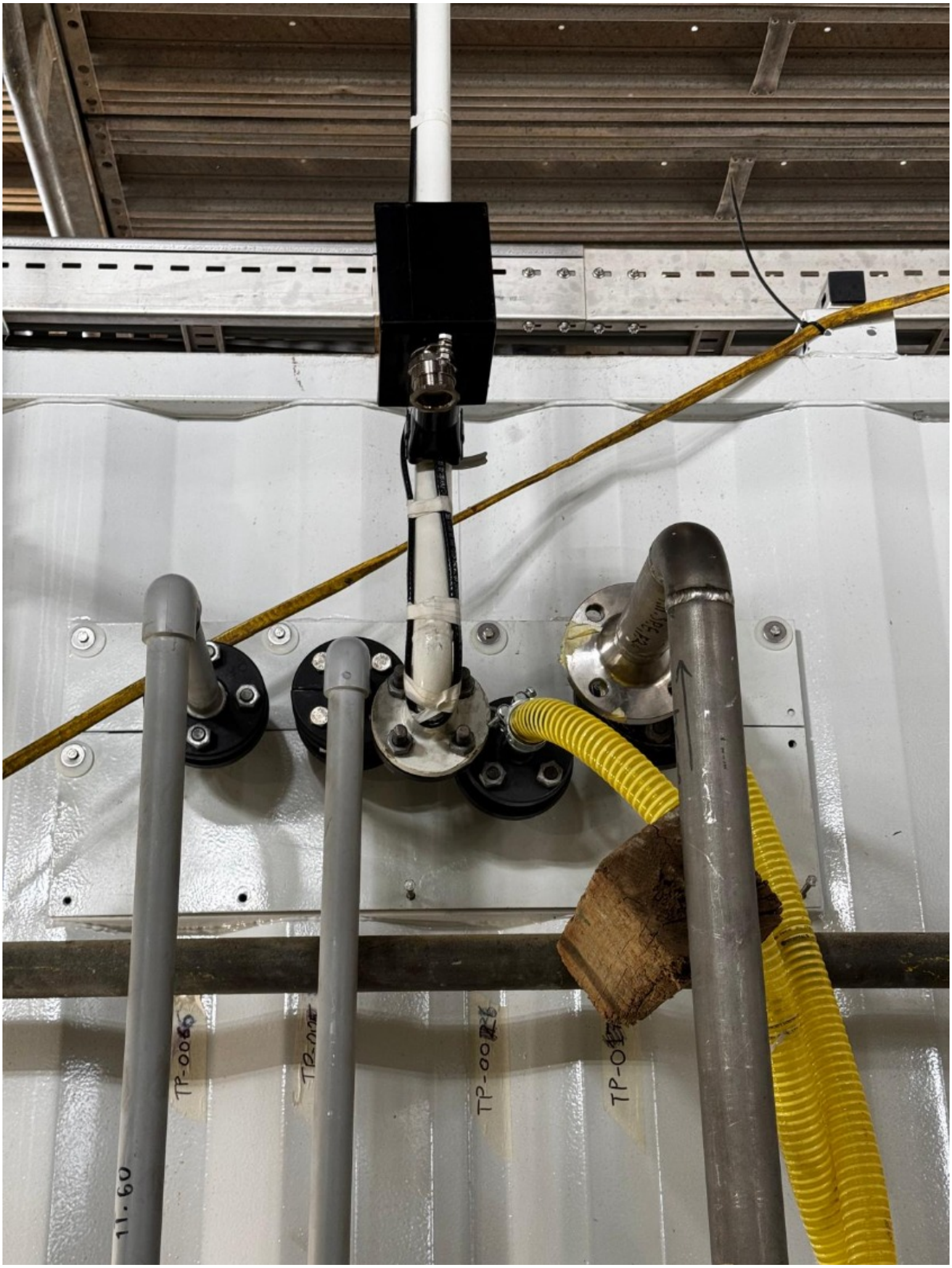
5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga
Date: 2025-03-27
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-27
Signature:


11.60
TP-0066
TP-0026

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004103

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Tag T-50003 is not installed.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

To be installed after SAT.

Name: Lorenzo Novaga
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004102

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Tag S-50002B is not installed.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

To be installed after SAT.

Name: Lorenzo Novaga
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


IN
S-50002B

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004101

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

Some items are not in the correct position (see attached) relative to the document 1724000448-MAC-DA-00005. Align the drawing if marked PID is correct.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

The drawing nr: 1724000448-MAC-DA-0005 has been revised and re issued in as built revision

Name: PSC
Date: 2025-04-23
Signature:

5 - CLEARANCE CHECK

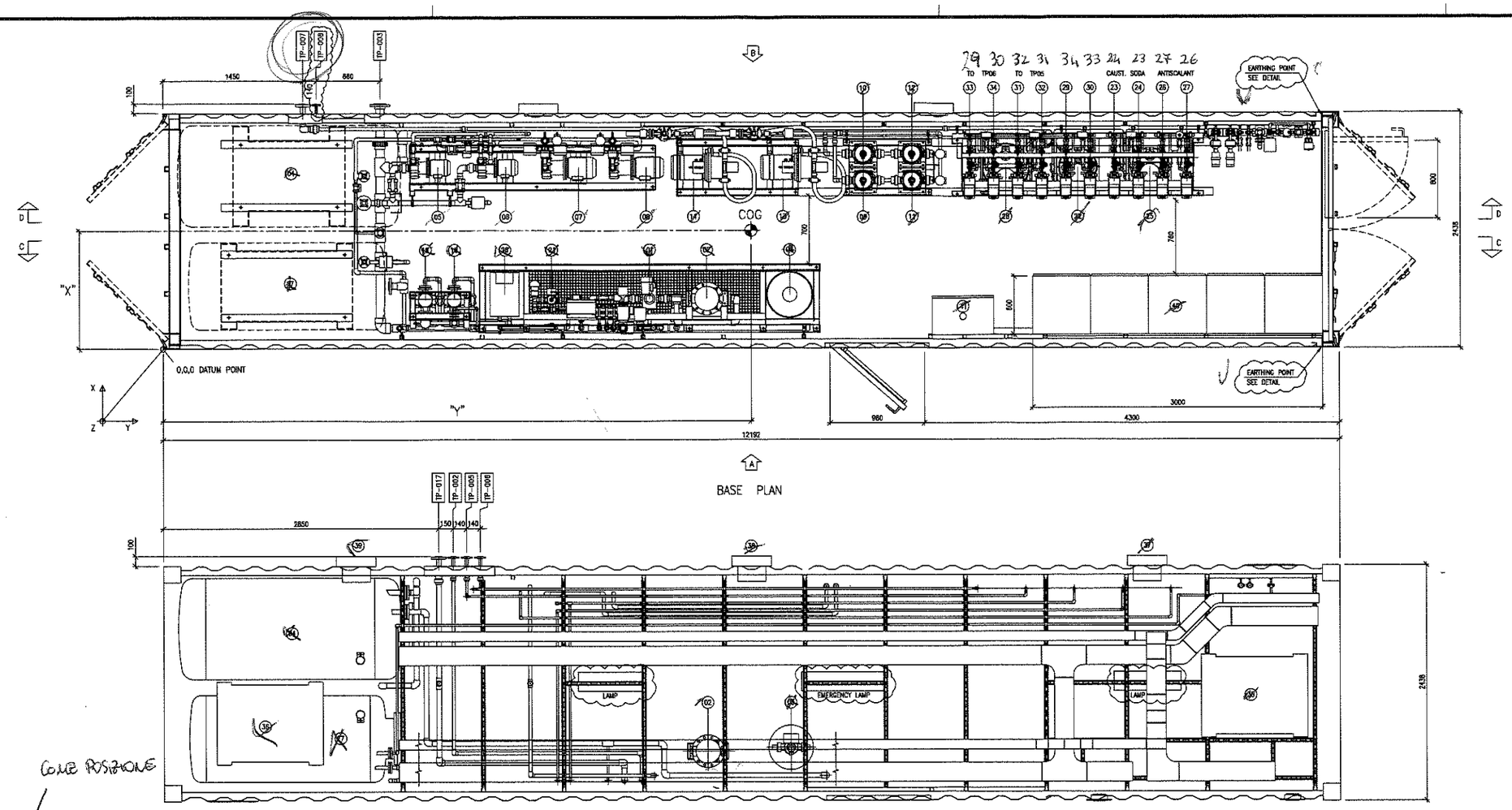
done

Name: Stefano Linari
Date: 2025-04-23
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

DRAWING NO. 1724000448-MAC-DA-00005 REV. 04



TOP PLAN (OUTSIDE PARTIAL PLAN)

EARTHING POINT DETAIL

COME POSIZIONE

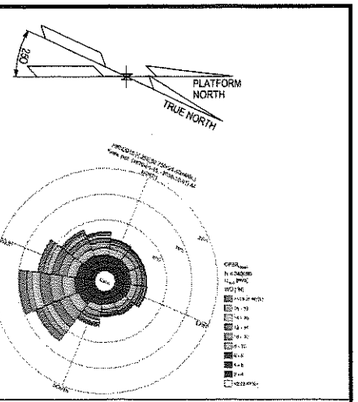
EQUIPMENT LIST				
REF.	ITEM	DESCRIPTION	WEIGHT (empty) kg	WEIGHT (full) kg
~~01~~	A50003	SEA WATER COARSE FILTER	7	20
~~02~~	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
~~04~~	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
~~07~~	P50003A	SW BOOSTER PUMP	20	25
~~08~~	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
~~17~~	T50008	FRESH WATER TANK	200	2200
~~18~~	P50009A	FRESH WATER PUMP	20	25
~~19~~	P50009B	FRESH WATER PUMP	20	25
~~20~~	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
~~22~~	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
~~25~~	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
~~28~~	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
~~35~~	HHS-50003A	CONTAINER ELECTRICAL HEATER	90	90
~~36~~	HHS-50003B	CONTAINER ELECTRICAL HEATER	90	90
~~37~~	HFA-50001A	CONTAINER AIR FAN	–	–
~~38~~	HFA-50001B	CONTAINER AIR FAN	–	–
~~39~~	HFA-50001C	CONTAINER AIR FAN	–	–
~~40~~	50-LP-001	MCC & PLC PANEL	1800	1800
~~41~~	50-LP-002	FIRE & GAS PANEL	50	50
42	JB-500E8	JUNCTION BOX FOR POWER SUPPLY	10	10
~~43~~	JB-500F8	JUNCTION BOX FOR POWER SUPPLY FROM UPS	5	5

→ TAG STACCATO

→ P&C STACCATO

CONTAINER TOTAL WEIGHT	
DESCRIPTION	
LIFTING CONDITION	10500 kg
OPERATING CONDITION	15675 kg

C.O.G.			
DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-017	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-002	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-003	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-005	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-006	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-007	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN
TP-008	1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CONTAINER OPEN DRAIN

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET
1724000448-N-DC-00014	WIRING DIAGRAM

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	26-NOV-24	PSC	UR	RM	ACCEPTED FOR CONSTRUCTION
03	31-OCT-24	PSC	UR	RM	ACCEPTED FOR CONSTRUCTION
02	23-JUL-24	PSC	UR	RM	ACCEPTED FOR CONSTRUCTION
01	07-MAY-24	PSC	UR	RM	ISSUE FOR REVIEW
00	10-APR-24	PSC	UR	RM	ISSUE FOR REVIEW

CROSSWIND — ROSETTI MARINO

TITLE : WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LOADING CALCULATIONS—PLANS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 26/
A1	DRAWING NO. 1724000448-MAC-DA-00005		SHEET 0(

1724000448-MAC-DA-00005_sh.1 rev04

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004100

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

There are mechanical damage. Restore the paint with a touch up

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-05-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:







ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004099

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

There is a little damage on north side door. See attached photo.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Accepted as it is by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004098

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002351	1.4 Discipline	Mechanical
1.2 Item	A-50000	Water Treatment Package	
1.3 Subsystem	50-10	Water Desalination Package & Distribution	

2 - OBSERVATION

The grounding system is not as specified. In the field there are two grounding lugs on the north side.
Produce a mark up on drawing 123A90-FDL-EL-DL-20133.

Name: Lorenzo Novaga
Date: 2025-02-24
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-24
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

RLMU has been issued and reviewed by CPY. Pls, refer to the attached transmittal

Name: Raffaele Degli Esposti
Date: 2025-08-13
Signature:

5 - CLEARANCE CHECK

Completed.

Name: Raffaele Degli Esposti
Date: 2025-08-13
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-08-13
Signature:

CrossWind HKN
TBA
TBA
United Kingdom

Crosswind C.V.
Hofplein 20
Rotterdam
Zuid holland 3032 AC Netherlands

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Transmittal	CWHKN-TRANSMIT-028975	ROSMA-TRANSMIT-004931

Re: ELECTRICAL RED LINE MARK-UP

From	Mrs Documentcontrol CrossWind - Crosswind C.V.
To (2)	Mrs Brunella Negrini - ROSETTI (+1 more...)
Cc	Mr Massimiliano Brunelli - ROSETTI
Sent	Friday, 1 August 2025 11:54:17 AM BST (GMT +01:00)
Reason	Issued for Information
Status	N/A

DETAILS

WBS scope 1	Baseload power hub
Discipline	Innovations package mgt

DOCUMENT ATTACHMENTS (2)

(**0** selected)

File	Document No	Revision	Title	Status	Due Date
	CWHKN-INN-BPH-CRS-01584	00	ELECTRICAL RED LINE MARK-UP CRS	Close-Out	
	ROSMA-INN-BPH-OTH-00215	00	ELECTRICAL RED LINE MARK-UP	Code 1 - no comments	

MESSAGE

Dear Rosetti,

Please find attached for information.

Regards,
CRW DC

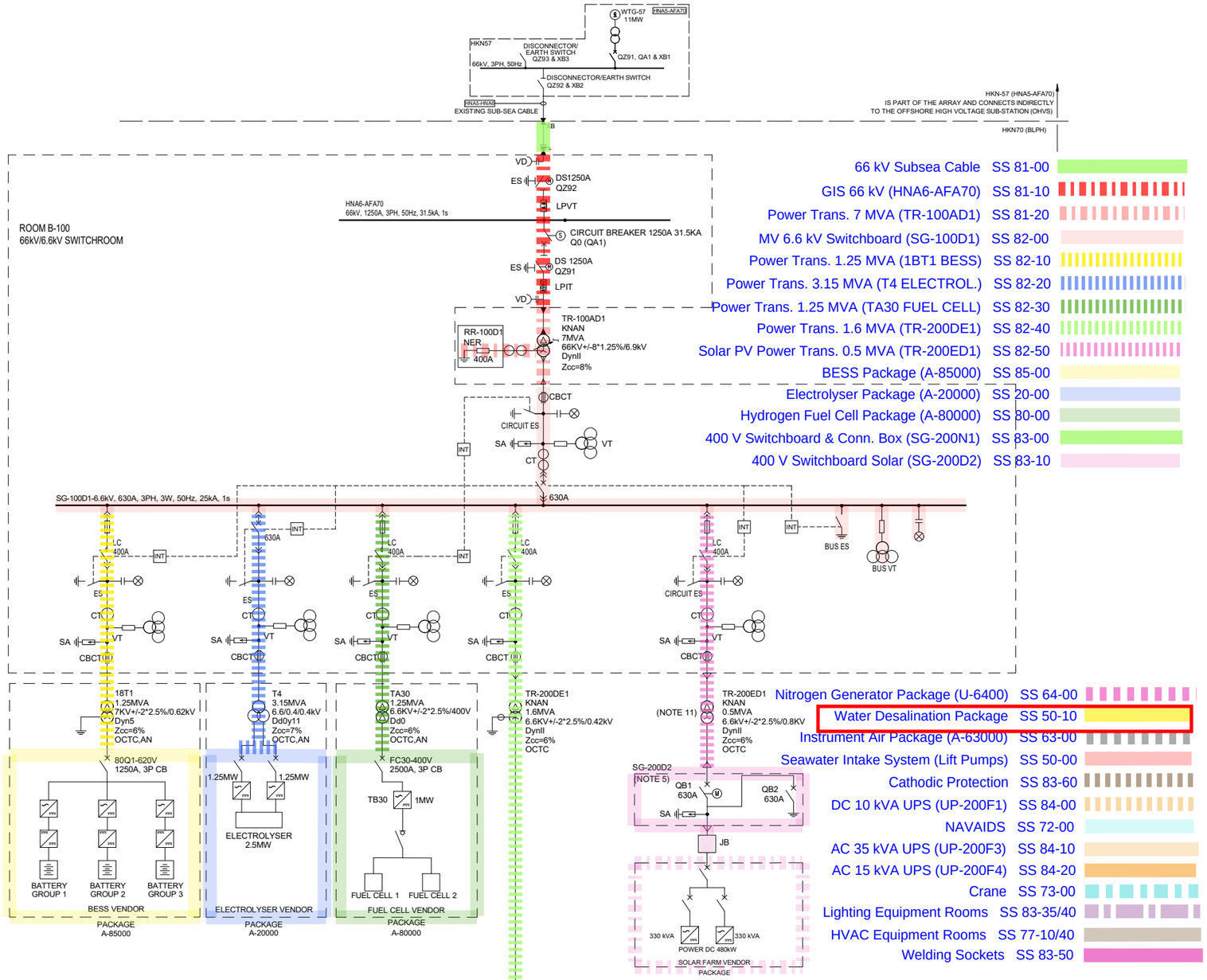
From: L Alberici
Sent: 03/07/2025 8:18:05 AM BST (GMT +01:00)
To: Documentcontrol CrossWind
Cc: Massimiliano Brunelli
Mail Number: ROSMA-TRANSMIT-004931
Subject: ELECTRICAL RED LINE MARK-UP

WBS scope 1:	Baseload power hub
Discipline:	Innovations package mgt

Dear Team,
please find attached the Electrical Red Line Mark-up for company acceptance in order to proceed with AS BUILT documentation.

Kind Regards
Laura

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS



66 kV Subsea Cable	SS 81-00	
GIS 66 kV (HNA6-AFA70)	SS 81-10	
Power Trans. 7 MVA (TR-100AD1)	SS 81-20	
MV 6.6 kV Switchboard (SG-100D1)	SS 82-00	
Power Trans. 1.25 MVA (1BT1 BESS)	SS 82-10	
Power Trans. 3.15 MVA (T4 ELECTROL.)	SS 82-20	
Power Trans. 1.25 MVA (TA30 FUEL CELL)	SS 82-30	
Power Trans. 1.6 MVA (TR-200DE1)	SS 82-40	
Solar PV Power Trans. 0.5 MVA (TR-200ED1)	SS 82-50	
BESS Package (A-85000)	SS 85-00	
Electrolyser Package (A-20000)	SS 20-00	
Hydrogen Fuel Cell Package (A-80000)	SS 80-00	
400 V Switchboard & Conn. Box (SG-200N1)	SS 83-00	
400 V Switchboard Solar (SG-200D2)	SS 83-10	
Nitrogen Generator Package (U-6400)	SS 64-00	
Water Desalination Package	SS 50-10	
Instrument Air Package (A-63000)	SS 63-00	
Seawater Intake System (Lift Pumps)	SS 50-00	
Cathodic Protection	SS 83-60	
DC 10 kVA UPS (UP-200F1)	SS 84-00	
NAVAIDS	SS 72-00	
AC 35 kVA UPS (UP-200F3)	SS 84-10	
AC 15 kVA UPS (UP-200F4)	SS 84-20	
Crane	SS 73-00	
Lighting Equipment Rooms	SS 83-35/40	
HVAC Equipment Rooms	SS 77-10/40	
Welding Sockets	SS 83-50	

SYMBOL LEGEND:

- VOLTAGE DETECTOR
- EARTHING SWITCH DISCONNECTOR
- MOTORIZED EARTHING SWITCH
- CIRCUIT BREAKER
- FUSE
- CONTACTOR
- THREE-PHASE TRANSFORMER WITH TAP CHANGER
- THREE-PHASE TRANSFORMER
- CURRENT TRANSFORMER
- THREE-PHASE TRANSFORMER, WITH THREE WINDINGS
- NEUTRAL EARTHING RESISTOR
- SURGE ARRESTER
- CORE BALANCE CURRENT TRANSFORMER
- SURGE ARRESTOR FOR T-CONNECTOR (N.1 FOR EACH PHASE)
- VOLTAGE & CURRENT TRANSFORMER (3Ø X 2) (LPIT TYPE)
- VOLTAGE TRANSFORMER (3Ø X 2) (LPVT TYPE)
- VOLTAGE TRANSFORMER
- CABLE BOX
- T-CONNECTOR CABLE TERMINATION
- CABLE AIR TERMINATION

OLTC	= ON LOAD TAP CHANGER
OCTC	= OPEN CIRCUIT TAP CHANGER
KNAN	= NON-MINERAL OIL NATURAL AIR COOLED
AN	= AIR NATURAL
XB	= CABLE BOX
QZ	= DISCONNECT SWITCH & EARTH SWITCH
QA	= CIRCUIT BREAKER
LC	= LATCHED FUSED CONTACTOR (400A)
INT	= INTERLOCK SYSTEM
SA	= SURGE ARRESTER
CBCT	= CORE BALANCE CURRENT TRANSFORMER
ES	=EARTHING SWITCH
VD	=VOLTAGE DETECTOR
LCP	=LOCAL CONTROL PANEL
LPVT	=LOW POWER VOLTAGE TRANSFORMER
LPCT	=LOW POWER CURRENT TRANSFORMER
LPIT	=LOW POWER INSTRUMENT TRANSFORMER
JB	=JUNCTION BOX

NOTES:

1. TEMPORARY POWER SUPPLY CONNECTION BOX LOCATED ON OUTSIDE WALL OF LV SWITCHROOM / CONTAINER.
2. LOAD DEFINITION 'ESSENTIAL' / 'NON-ESSENTIAL' IS SHOWN IN THE LOAD LIST. THE CCS, EMCS AND 'SMART' SWITCHGEAR WILL OPEN / CLOSE CIRCUIT BREAKERS AS REQUIRED.
3. A COMBINED CCS/EMCS SYSTEM COMPRISES A MICROPROCESSOR BASED SYSTEM, ASSOCIATED SOFTWARE AND REQUIRED PERIPHERALS FOR MONITORING AND CONTROLLING OF ELECTRICAL POWER NETWORK. ALL ELECTRICAL EQUIPMENT AND PACKAGE UNITS SHALL BE CONNECTED TO THE CENTRAL CONTROL SYSTEM .
4. IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM SUPPLIED BY COMPANY.
5. THE SOLAR FARM IN-FEED POWER CIRCUIT BREAKERS PANEL IS LOCATED INSIDE THE LV SWITCHGEAR ROOM B-200.
6. DELETED.
7. DELETED.
8. DELETED.
9. CROSSWIND SHALL BE ABLE TO CONTROL THE BLPH 66KV MOTORISED CIRCUIT BREAKER Q0 (QA1) & MOTORISED ELECTRICAL DISCONNECTOR / EARTH SWITCH (QZ92, TYPE B) USING THEIR 'HV-SCADA' SYSTEM. THIS BACK-UP / REDUNDANT CONTROL SHALL BE ADDITIONAL TO THAT PROVIDED BY THE CCS AND BE OF HIGHER PRIORITY OVER A SEPARATE FIBRE OPTIC CABLE (FOC). THE CCS OPERATOR AND 'HV-SCADA' SHALL BOTH BE KEPT FULLY AWARE OF EQUIPMENT STATUS AT ALL TIMES. INTERTRIPPING, INHIBITS & INTERLOCKING FOR BLPH 66KV EQUIPMENT SHALL BE AS PER THE WIND FARM.
10. THE LOADS IN THE LOW VOLTAGE SWITCHGEAR AND THE CURRENT VALUES OF THE CIRCUIT BREAKERS ARE ONLY INDICATIVE.
11. NEUTRAL POINT OF TR-200ED1 SHALL NOT BE GROUNDED AS REQUIRED BY SOLAR FARM SUPPLIER IN 123A90-PML-PM-TQ-00040.

REFERENCES:

1. 123A90-DDL-EL-DG-20014 ELECTRICAL CONTROL, PROTECTION AND METERING DIAGRAMS
2. 123A90-DDL-EL-DG-20015 ELECTRICAL SINGLE LINE DIAGRAM 6.6kV SYSTEMS
3. 123A90-DDL-EL-DG-20159 ELECTRICAL SINGLE LINE DIAGRAMS LV SYSTEM
4. 123A90-DDL-EL-DG-20160 ELECTRICAL SINGLE LINE DIAGRAMS AC UPS SYSTEMS
5. 123A90-DDL-EL-DG-20161 ELECTRICAL SINGLE LINE DIAGRAMS DC UPS SYSTEMS
6. 123A90-DDL-EL-DG-20185 ELECTRICAL SINGLE LINE DIAGRAM HV SYSTEMS
7. 123A90-DDL-EL-DL-20104 ELECTRICAL EQUIPMENT LAYOUT - HV SWITCHROOM
8. 123A90-DDL-EL-DL-20105 ELECTRICAL EQUIPMENT LAYOUT - LV SWITCHROOM
9. 123A90-DDL-EL-LIS-20016 ELECTRICAL LOAD LIST and BALANCE -CCS MODE CHARGING-
10. 123A90-DDL-EL-RE-20152 ELECTRICAL EQUIPMENT SIZING CCALCULATION REPORT
11. 123A90-DDL-EL-RE-20170 ELECTRICAL SYSTEM STUDY REPORT - LOAD FLOW
12. 123A90-DDL-EL-RE-20171 ELECTRICAL SYSTEM STUDY REPORT - SHORT CIRCUIT
13. 123A90-DDL-EL-RE-20172 ELECTRICAL SYSTEM STUDY REPORT - ARC FLASH ENERGY CALCULATION
14. 123A90-DDL-EL-RE-20173 ELECTRICAL SYSTEM STUDY REPORT - HARMONICS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	02/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

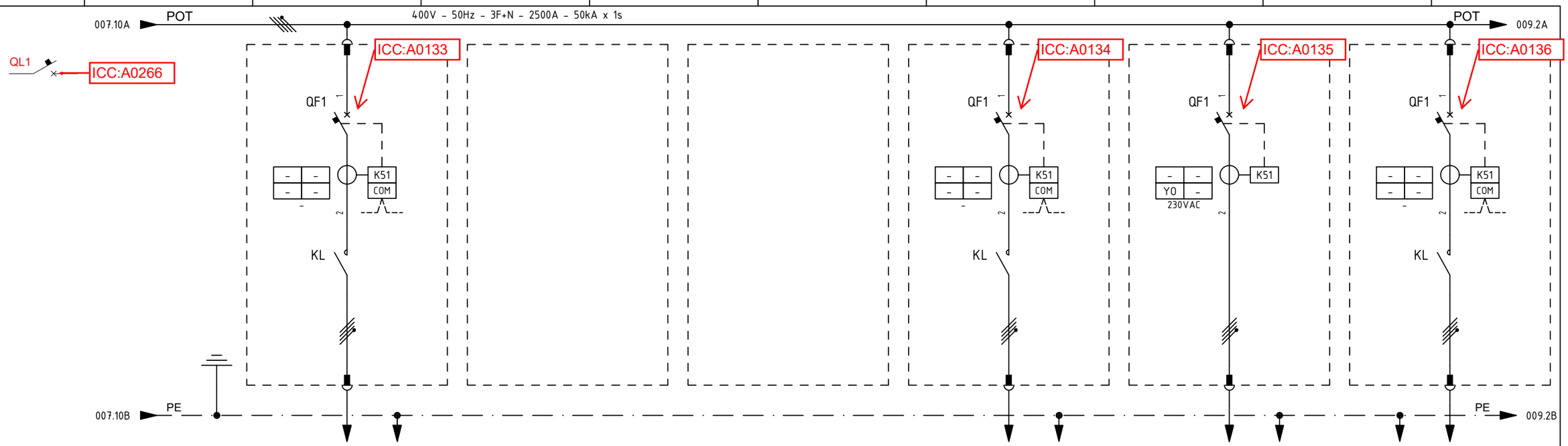
OVERALL/KEY SINGLE LINE DIAGRAM

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE N/A
DRAWN GPA	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 26/03/2023
A1	DRAWING NO. 123A90-DDL-EL-DG-20158	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DG-20158 REV. 01

File Name : 123A90_DDL_EL_DG_20158_REV01.dwg

01



ITEM			1	SPARE		-			JB-500E8		UP-200F3		B100-HSB-001	
UTILITY			2	SPARE		FUTURE			WATER PACKAGE		AC UPS PAS - 30 MIN UP-200F3 - LINE B		HVAC PANELS HV ROOM	
COLUMN/CUBICLE			3	A3 / +05		A3 / +06			A3 / +08		A4 / +01		A4 / +02	
RATED POWER | RATED CURRENT			4/5	5.5 kW	9.93 A	-	-		67 kW	107.00 A	36.0 kW	57.8 A	18 kW	34.1 A
TYPICAL FUNCTIONAL			6	LK1-40					LK2-160		L1-100		LK1-40	
CIRCUIT BREAKER (ABB)	TYPE		7	XT2S - 160					XT4S - 250		XT2S - 160		XT2S - 160	
	VERSION		8	4P - FIXED					4P - FIXED		4P - FIXED		4P - FIXED	
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 40A)					EKIP HI TOUCH LSIG (In = 160A)		EKIP DIP LSIG (In = 100A)		EKIP HI TOUCH LSIG (In = 40A)	
	Icu	KA	10	50 kA					50 kA		50 kA		50 kA	
OVERLOAD	L	Range A	11	(0.4 - 1) x In					(0.4 - 1) x In		(0.4 - 1) x In		(0.4 - 1) x In	
		Range t	12	k/I^2					k/I^2		k/I^2		k/I^2	
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In					(0.6 - 10) x In		(1 - 10) x In		(0.6 - 10) x In	
		Range t	14	0.05 - 0,4 sec / k/I^2					0.05 - 0.4 sec / k/I^2		0.05 - 0.4 sec / k/I^2		0.05 - 0,4 sec / k/I^2	
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In					(1.5 - 15) x In		(1 - 10) x In		(1.5 - 15) x In	
		Range t	16	instantaneous					instantaneous		<= 0.02 sec		instantaneous	
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In					(0.1 - 1) x In		(0.2 - 1) x In		(0.1 - 1) x In	
		Range t	18	t=k / t=k/I^2					t=k / t=k/I^2		0.1 - 0.8 sec		t=k / t=k/I^2	
CONTACTOR (ABB)			19	AF40-40-00-13 (70A-AC1); 100-250VAC/DC					AF190-40-11-13 (275A-AC1); 100-250 VAC/DC		-		AF40-40-00-13 (70A-AC1); 100-250VAC/DC	
THERMAL OVERLOAD RELAY (ABB)			20	-					-		-		-	
SURGE ARRESTER (DEHN)			21	-					-		-		-	
TOROIDAL CURRENT TRANSFORMER (FRER)			22	-					-		-		-	
FUSE HOLDER (ITALWEBER)			23	SUBSISTEM 83.00					SUBSISTEM 50.10		SUBSISTEM 84.10		SUBSISTEM 77.10	
INDIRECT PROTECTION (ABB)			24											
VOLTMETER			25											
CURRENT TRANSFORMER FOR MEASURE (FRER)	TYPE		26	-					-		-		-	
	PERFORMANCE/CLASS		27	-					-		-		-	
VOLTAGE TRANSFORMER FOR MEASURE (FRER)	TYPE		28	-					-		-		-	
	PERFORMANCE/CLASS		29	-					-		-		-	
LOCK-OUT RELAY (-)			30	-					-		-		-	
POWER CONDUCTOR		mmq	31	-					5G70		4G35		5G16	

=
+

DWG n° : 231298/SD/11
Item n° : PF1002983/26

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
3	08/07/2024	Santinelli	Flamminio	Sigismondi	Accepted for Construction (AFC)
2	03/05/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
1	28/03/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)
0	15/02/2024	Santinelli	Flamminio	Sigismondi	Issued for review (IFR)

IMESA ELECTRICAL ENGINEERING

CROSSWIND

ROSETTI MARINO

TITLE : "SG-200N1"

SINGLE LINE DIAGRAM

Single Line Drawing

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

SCALE : NTS

A3

DRAWING NO. 1723002197-EL-DG-00011

SHEET 008

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 1723002197-EL-DG-00011 Rev. 03

DRAWING_NO.

REV.

Sea Water Intake System	SS 50-00	
Electrochlorinated Water	SS 50-11	
Waste Water Disposal System	SS 55-00	
Waste Water Brine Disharge System	SS 55-01	
Water Desalination & Distribution System	SS 50-10	

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr
02

02

GAS CONFIRMED 50 XA 001 — F&G
SMOKE CONFIRMED 50 XA 002 — F&G
FAULT PACKAGE 50 XA 003 — ESD
50-XS-001 SHUT-DOWN — ESD
NOTE 6

CONTRACTOR | SUPPLIER

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
02
BLPH-MV-471
SB
1"-SWS-290-01SD-E
50 TT 001
50 TE 001
1.1/2"
4"x1.1/2"
ECC. RED.
TP 017
E
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
BLPH-MV-241 3/4"

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

02
FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005
123A90-DDL-PR-PID-80021
TO SEA WATER LIFT PUMP AND LIFT PUMP CAISSONS
1"-CI-029-01CP-E

1"-CI-043-01CP-E
TP 006
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK
DECK HOOK-UP 003
02

SUPPLIER | CONTRACTOR

TP 003
1.1/2"x1"
3"x1.1/2"
1"-SWR-045-01CS-H
123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

TP 007
1.1/2"x1"
1"-WW-038-01CS-H
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

NOTES

1. DELETED. 02
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED. 02
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED. 02
5. DELETED.
6. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS	
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80022	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Water Desalination & Distribution System SS 50-10

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr
02

02

CONTRACTOR SUPPLIER

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80022

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80024

A-50000
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80022

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80024

SUPPLIER CONTRACTOR

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

02

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER TREATMENT PLANT SHEET 1

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80023	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Water Desalination & Distribution System SS 50-10

A-50000

WATER TREATMENT PACKAGE

CAPACITY : 2.5 m³/hr

02

02

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

SUPPLIER | CONTRACTOR

A-50000

WATER TREATMENT PACKAGE

SEE VENDOR DRAWING

DOC. N. 1724000448-PR-PID-00013

1"-DM-001-01SS-E-1

123A90-DDL-PR-PID-80011

TO ELECTROLYSER PACKAGE

TP 002

PH
TEMPERATURE
HARDNESS
CONDUCIVITY

NOTE 8

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.
7. DELETED.

02

8. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM WATER TREATMENT UCP TO CONTROL SYSTEM IN ADDITION TO THE OTHER SOFTWARE SIGNALS.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

02

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :

BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER TREATMENT PLANT SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-PR-PID-80024	001	02

File Name : FILE_NAME

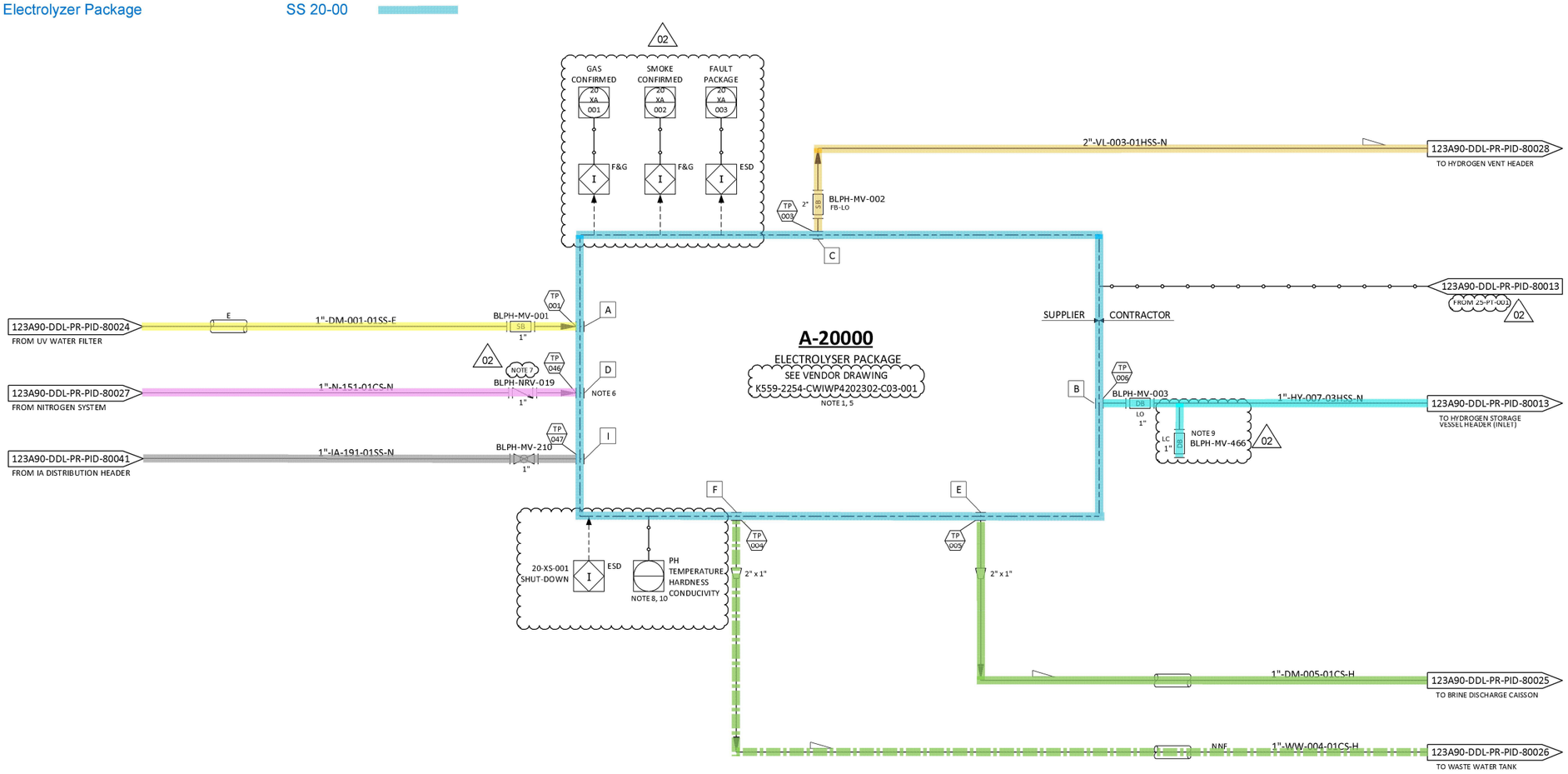
DRAWING NO. DRAWING_NO.

REV. REV

Instrumen Air Distribution Network	SS 63-30
Water Desalination & Distribution System	SS 50-10
Hydrogen Storage Vessel Header (Intel)	SS 43-00
Nitrigen Distribution Network	SS 64-11
Waste Water Brine Discharge System	SS 55-01
Waste Water Disposal System	SS 55-00
Hydrigen Storage Vessel Header (Intel)	SS 25-07
Electrolyzer Package	SS 20-00

A-20000
ELECTROLYSER PACKAGE

DUTY: 2.5MW
DESIGN PRESSURE: 40 barg
DESIGN TEMPERATURE: 80 °C
H2 GENERATING CAPACITY: 500 Nm³/h



NOTES

1. PACKAGE SUPPLIED WITH POWER FROM THE BLPH ELECTRICAL SYSTEM.
2. DELETED.
3. DELETED.
4. DELETED.
5. ELECTROLYSER PACKAGE INCLUDES AN OXYGEN VENT LINE WHICH IS IN THE SCOPE OF SUPPLY OF THE ELECTROLYSER PACKAGE UP TO THE ATMOSPHERE. NO PHYSICAL INTERFACE IS PRESENT BETWEEN ELECTROLYSER PACKAGE AND CONTRACTOR ON THIS LINE.
6. AN ISOLATION VALVE DOWNSTREAM THE CHECK VALVE NRV-019 IS PROVIDED WITHIN THE PACKAGE A-20000.
7. CHECK VALVE NRV-019 TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE ELECTROLYSER PACKAGE A-20000.
8. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
9. NITROGEN PURGING CONNECTION TO BE LOCATED AS CLOSE AS POSSIBLE TO MANUAL VALVE BLPH-MV-003.
10. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM CONTROL SYSTEM TO ELECTROLISER UCP IN ADDITION TO THE OTHER SOFTWARE SIGNALS.

02

HOLDS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80011	SHEET 001	REV. 02

File Name : FILE_NAME

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC & discipline : E

Electrical	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83016-CEL	LV Switchgear / Water Package	ONSHORE	C10000536	CPX09	100	2024-11-26	RFC 1
84313-CEL	AC UPS - PAS DB / UCP - Water Package	ONSHORE	C10000589	CPX09	100	2024-11-26	RFC 1
A-50000	Water Treatment Package	ONSHORE	C10002349	CZX01E	100	2024-11-26	RFC 2
JB-500E8	JB Water treatment package 1	ONSHORE	C10001278	CPX31	100	2024-11-26	RFC 1
JB-500F8	JB Water treatment package 2	ONSHORE	C10001279	CPX31	100	2024-11-26	RFC 1

ITEM	Tag	83016-CEL	: LV Switchgear / Water Package		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD_B-200/LD	
TASK	code	C10000536	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form CPX09	LV Power Cable

CABLE DATA

Type: Cu Cl.2/EPR/LSZH Cores/Size mm²: 5G70 mm2 Color: GREY

From: SG-200N1 To: JB-500E8

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	83016-CEL	: LV Switchgear / Water Package			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD_B-200/LD
TASK	code	C10000536		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX09 LV Power Cable

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

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

Comments:

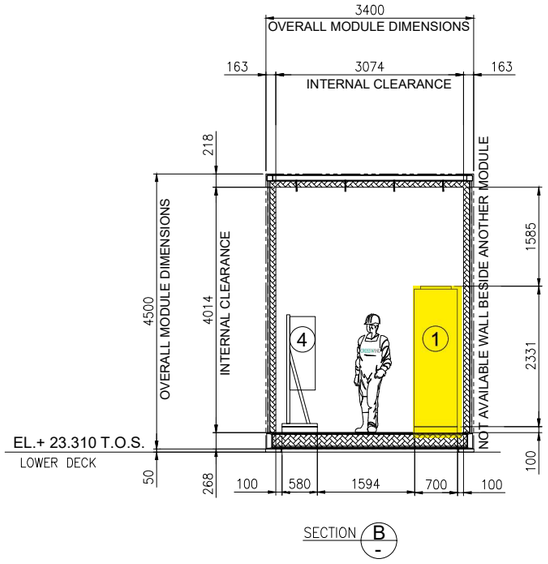
CORE CONTINUITY PH 4= 0.3
CORES / ARMOUR+EARTH INS. PH 4 = >999 M

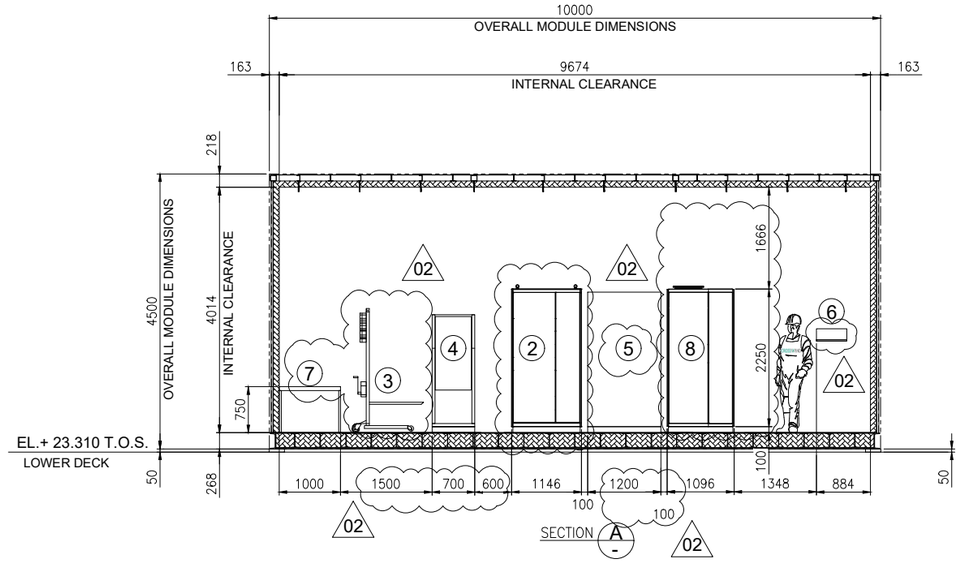
Nota 4: refer to PL C30000679

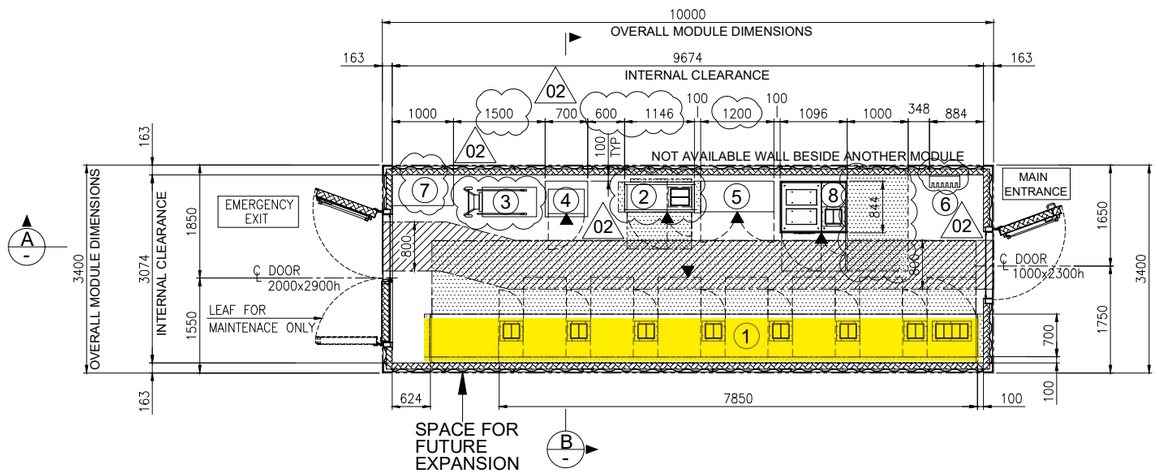
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-26	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:17:11.269Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:14:53.825Z	

DRAWING NO. 123A90-DDL-EL-DL-20105

REV. 02





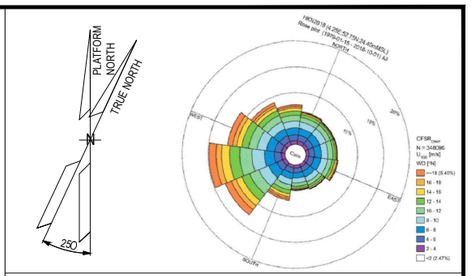


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

1

EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	NOTE
1	SG-200N1	400V SWITCHGEAR	7850	700	2331	
2	DP-200N1	DISTRIBUTION BOARD FOR LIGHTING AND SMALL POWER B.O.P.	1146	520	2250	
3	-	SERVICE TROLLEY FOR 400V SWITCHGEAR	1034	490	2030	
4	CN-200N1	ICCP PANEL	700	580	1830	
5	B200-HSB-001	DISTRIBUTION & HVAC PANEL - LV ROOM	1200	600	1900	02
6	-	TOOL BOX	495	200	200	
7	-	TABLE	1000	500	750	
8	SG-200D2	ACB PANEL FOR SOLAR PACKAGE	1096	844	2294	



NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DELETED.
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
4. FOR OTHER ITEMS, CORRECT LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND DEDICATED PROJECT DOCUMENTATION.
5. HEIGHT OF ALL PANELS IN THE EQUIPMENT LIST TABLE IS WITHOUT THE BASE FRAME (100mm)

02

LEGEND

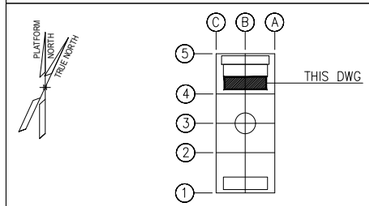
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

REFERENCES

DOCUMENT TITLE	DOCUMENT NUMBER
SG-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00007
SG-200D2 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00008
DP-200N1 GENERAL ARRANGEMENT DRAWING	1723002197-EL-DA-00009
AC UPS – GENERAL ARRANGEMENT AND DIMENSIONAL DRAWINGS	1724000372-EL-DA-00004
AC UPS – BATTERY LAYOUT INTERCONNECTING DIAGRAM	1724000372-EL-DG-00011
B-200 -GENERAL ARRANGEMENT DRAWINGS - E&I SHELTER	1724000049-AR-DA-00015
ICCC PANEL GENERAL ARRANGEMENT DRAWING	144671-CORR-TF-FAB-DWG-0003

02

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	27/05/2024	FMO	LMA/AMA	LMA/MDO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/03/2024	GPA	LMA/AMA	LMA/MDO	ISSUE FOR REVIEW (IFR)
00	08/11/2023	DSF	CB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

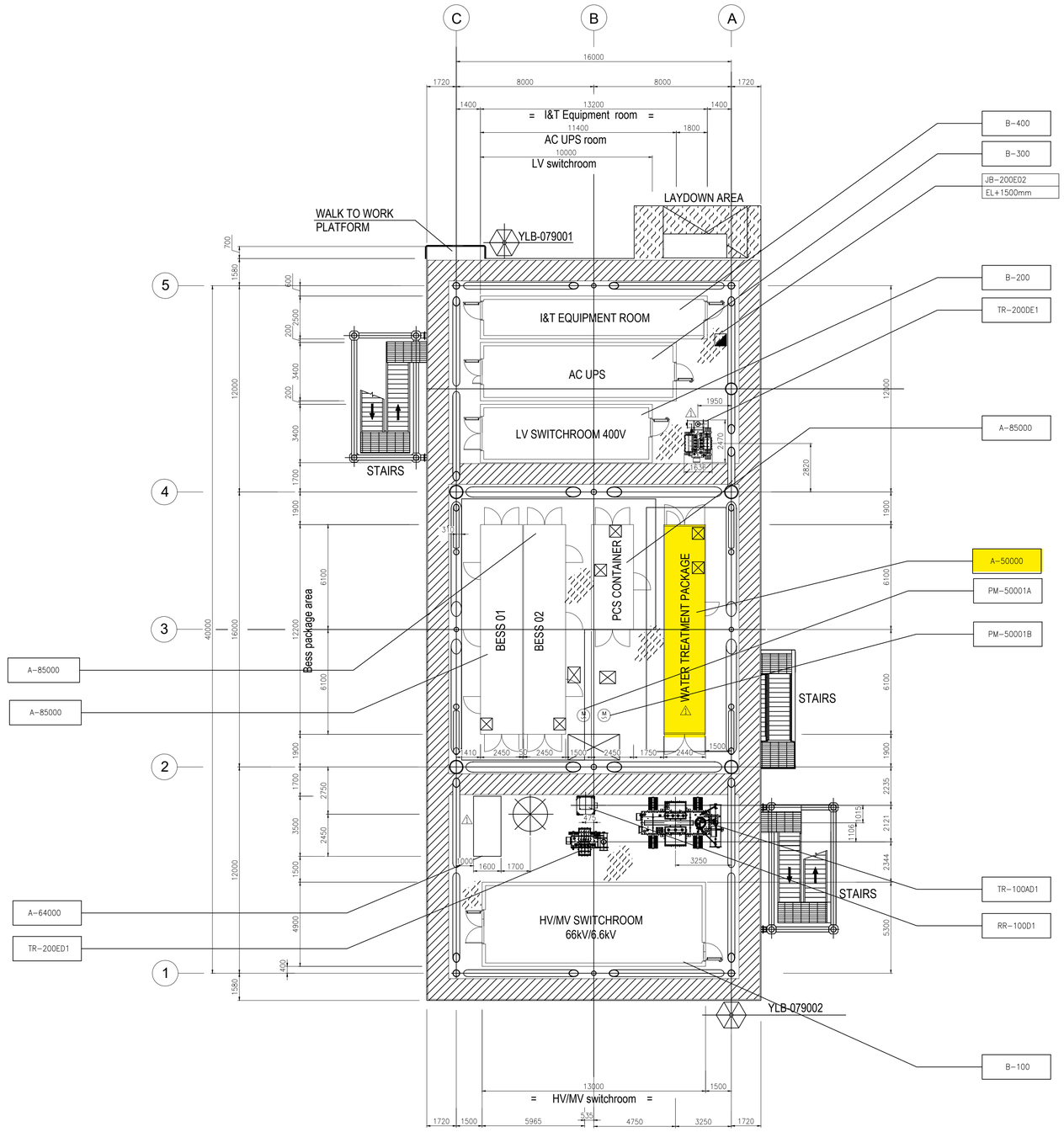
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN FMO	CHECKED LMA/AMA	APPROVED LMA/MDO	DATE 27/05/2024
A1	DRAWING NO. 123A90-DDL-EL-DL-20105	SHEET 001	REV. 02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20105**

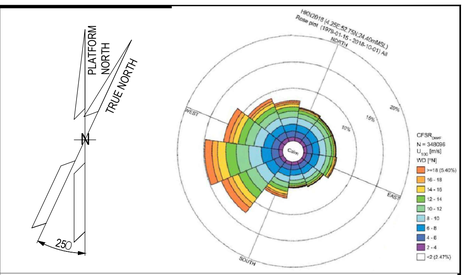
REV.:	DATE:	SIGNATURE:
2_A	08/08/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20105_REV02.dwg



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

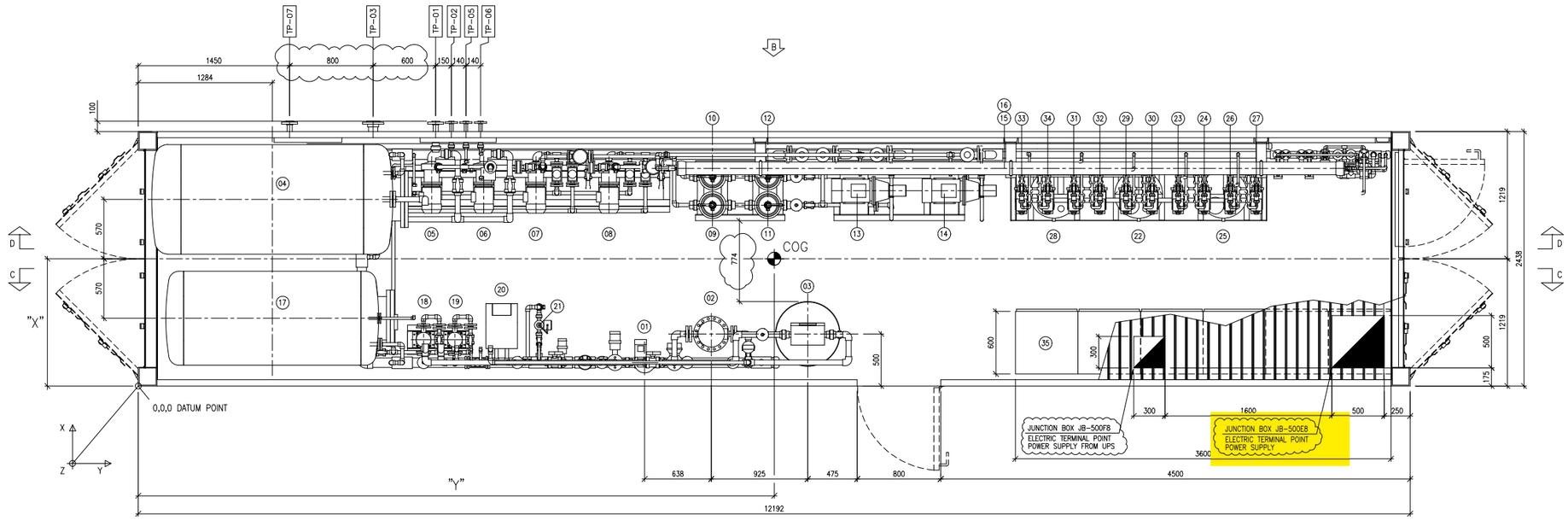
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

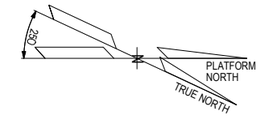
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

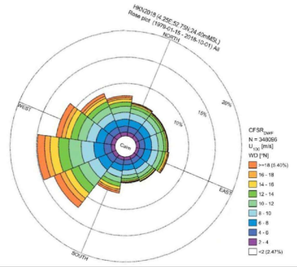
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20101
REV. 01
File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck



PLAN





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg	
DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-PLANS

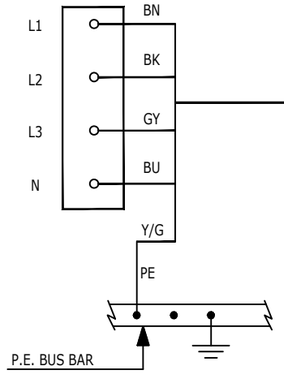
CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 001	REV. 2

File Name : 1724000448-MAC-DA-00005_Sh.01 rev2

FROM	TO

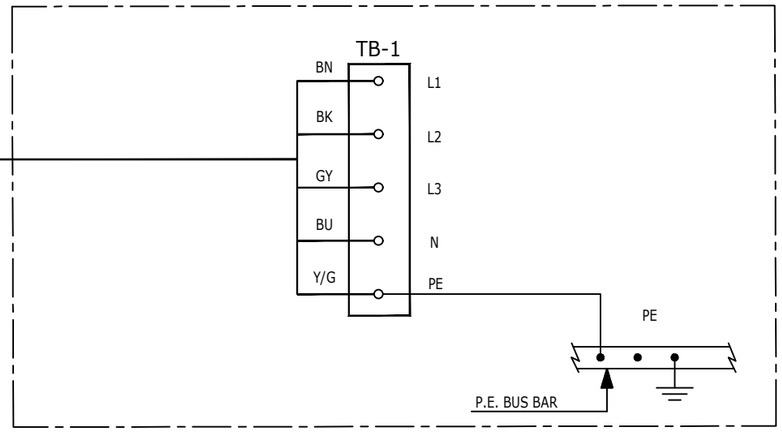
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.:A3/+08

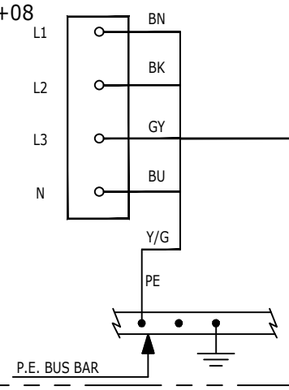


83016-CEL
5G70 mm²

DESCRIPTION: WATER PACKAGE
TAG NUMBER: JB-500E8

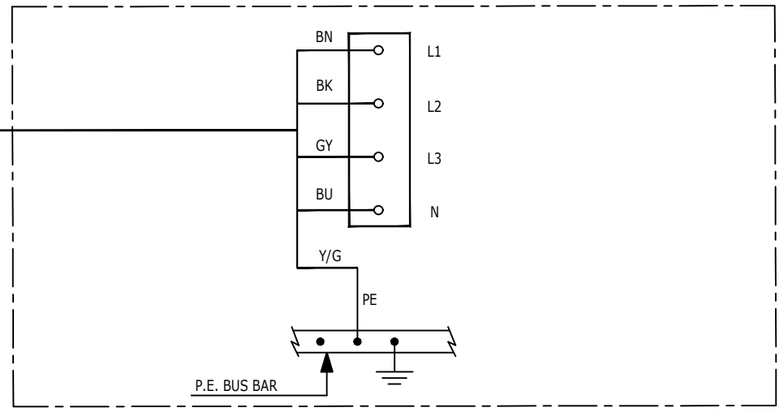


COLUMN/CUBIC.:A4/+08

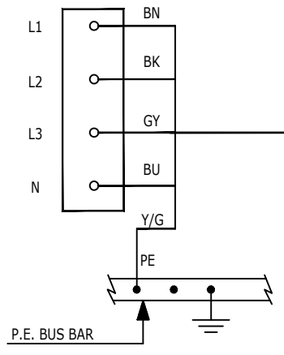


83017-CEL-1
5G70 mm²

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-A

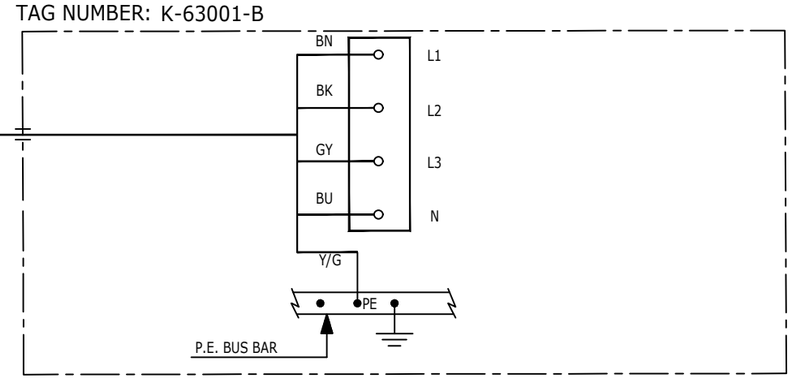


COLUMN/CUBIC.:A5/+08



83017-CEL-2
5G70 mm²

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-B



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20149**

REV.:	DATE:	SIGNATURE:
2_A	21/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
LV SWITCHGEAR SG-200N1

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

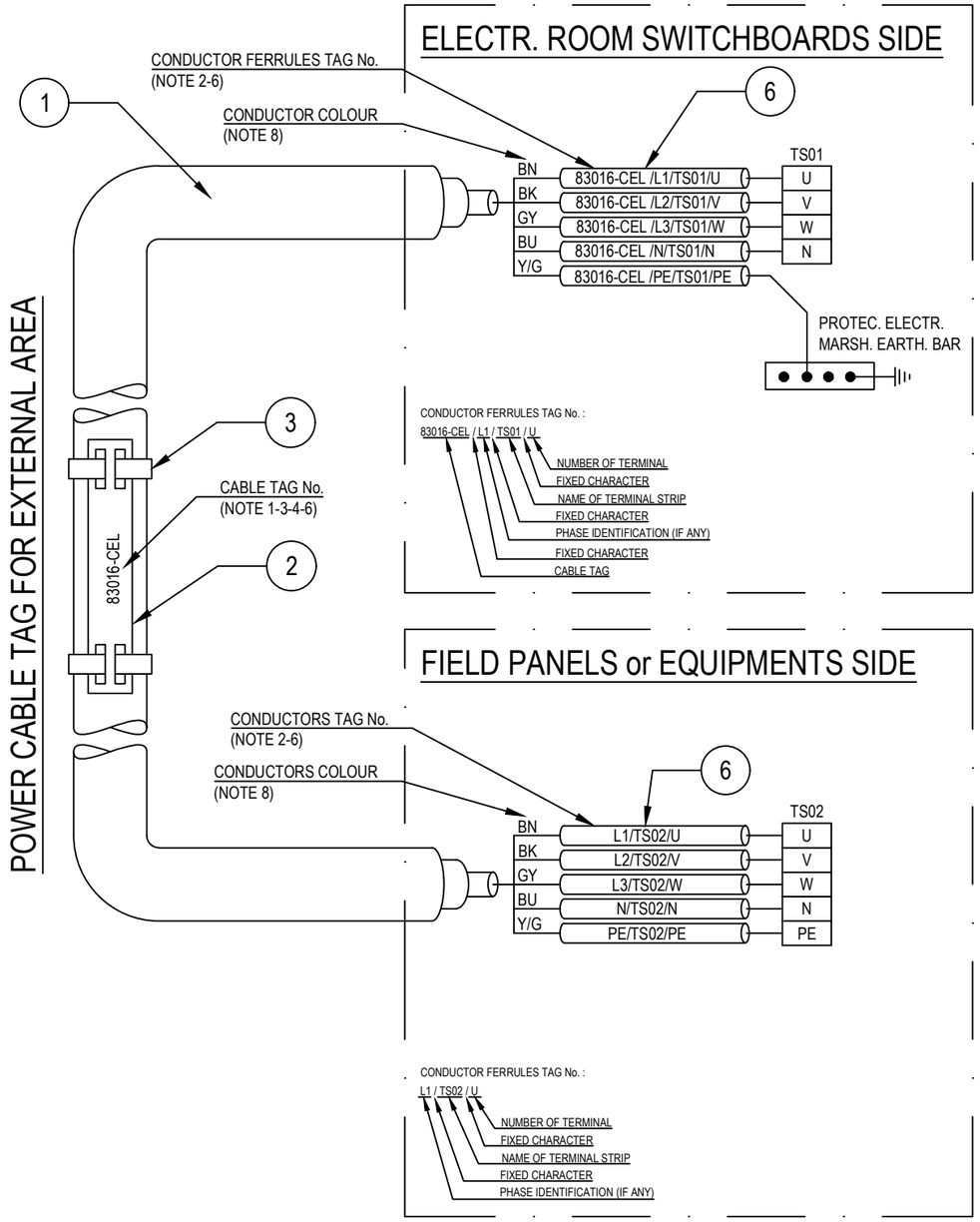
SHEET 023

REV. 02

File Name : 123A90-DDL-EL-DG-20149 Rev. 02

F.to UNI A3: 420mmx297mm

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

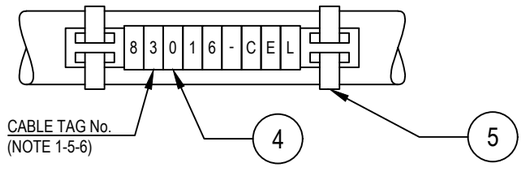
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

F.to UNI A3: 420mmx297mm

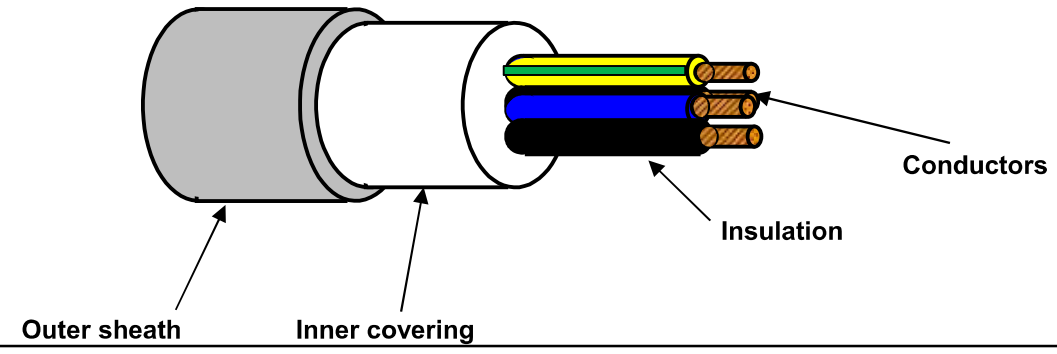
File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
83016-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	JB-500E8	Water Package JB	Lower Deck	ELECV14-5G70	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 5G70mm² - Grey	M50	n.a.			T1_M50_Single				L-450-101-LVT-024 / L-600-101-LVT-017 / E-MCT-202 / L-750-101-LVT-013 / L-750-101-LVT-014 / L-150-101-LVT-093 / L-150-101-LVT-111

FLEI s.r.l.

Cu Cl.2/EPR/LSZH 0,6/1 KV

5G70 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED COMPACTED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,4 mm	
Cores colour code :	**Black - Brown - Grey - Blue - Yellow/Green**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Cores layed up with optimal lay length	
Overall Wrapping:	Not required	
Drain wire :	Not required	
Overall Shield:	Not required	
Inner covering :	Extruded LSZH compound, Average Thickness 1,2 mm	
Inner covering color code:	**Black or Natural**	
Armour :	Not required	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,8 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 5G70 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 -**	
	Year of Manufacture - CE + Meter Marking	
Outer diameter :	(39,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 410 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.353**	
ON COMPLETE CABLE		
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance	IEC 61034.2 (LT ≥ 60%)	
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 covering together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	30/05/2024	Messa			
Checked :	30/05/2024	Spaccasassi			
Approved :	30/05/2024	Cucinotta			

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

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

ITEM	Tag	84313-CEL	: AC UPS - PAS DB / UCP - Water Package			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD_B-300/UD
TASK	code	C10000589		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical Form CPX09		LV Power Cable

CABLE DATA

Type	Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH	Cores/Size mm²	3G2,5 mm2	Color	ORANGE
From	DP-200F3	To	JB-500F8		

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

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

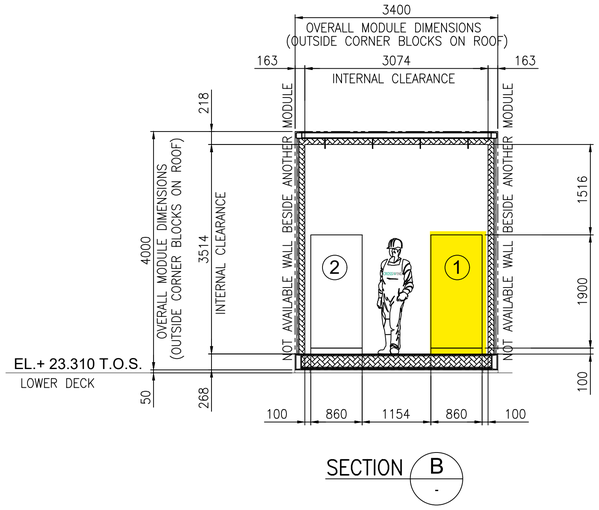
ITEM	Tag	84313-CEL	: AC UPS - PAS DB / UCP - Water Package		Dwg	123A90-DDL-EL-LIS-20148	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD_B-300/UD	
TASK	code	C10000589	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CPX09	LV Power Cable

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

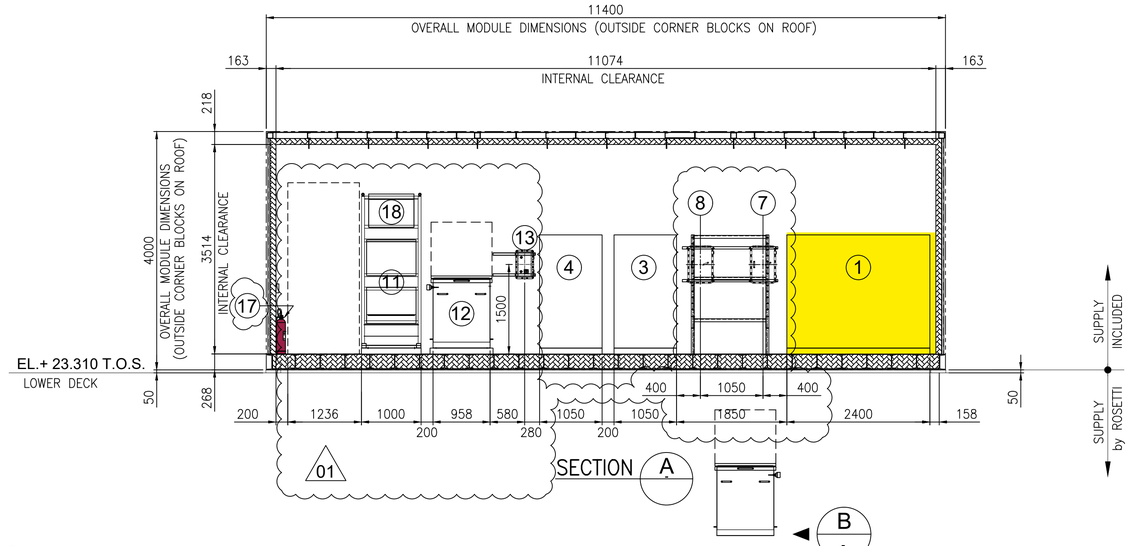
TESTING INSTRUMENTS USED			
TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207	TYPE / SERIAL N° :	MULTIMETER: FLUKE 175 SERIAL:AW1/018(17140769)
Calibration certificate N° and date:	N°7722/24 _ 10/07/2024	Calibration certificate N° and date:	N°7715/24 _ 10/07/2024

Comments: Nota 4: refer to PL C30000680/C30000682

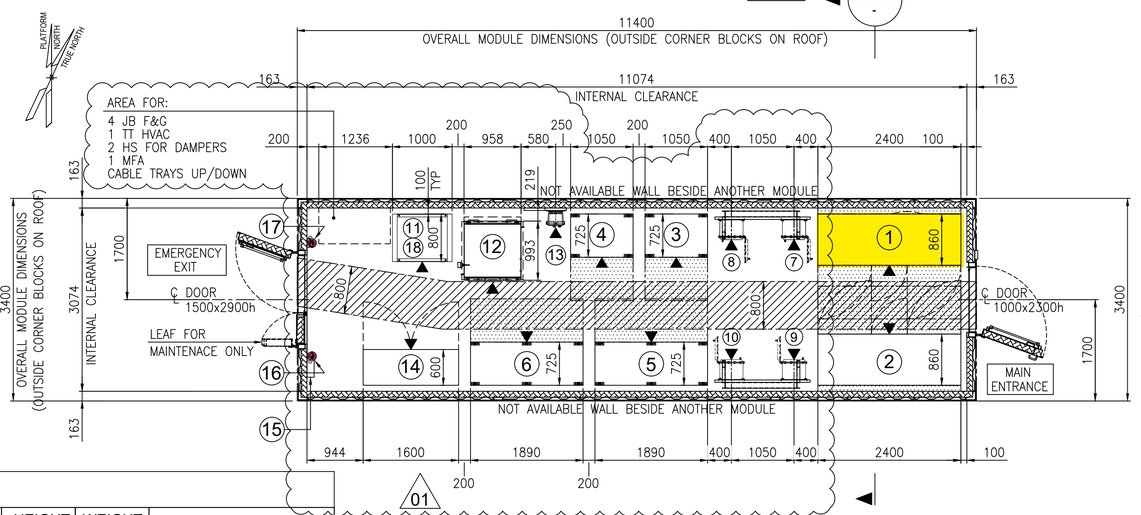
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-11-25	2024-11-26	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T16:32:40.440Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:19:34.936Z	



SECTION B



SECTION A



A

B

EQUIPMENT LAYOUT
"B-300" UPSs & BATTERIES SWITCHROOM
BOTTOM PLAN

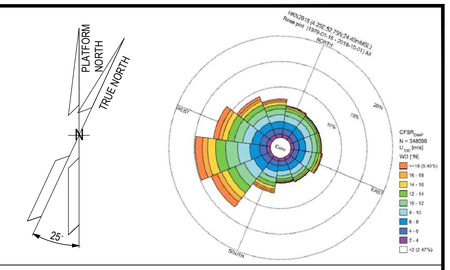
EQUIPMENT LIST

REF.	TAG No.	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (Kg)	NOTES
1	UP-200F3	AC UPS 35kVA	2400	860	1915	2258	
2	UP-200F4	AC UPS 15kVA	2400	860	1915	2258	
3	BA-200F3A	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
4	BA-200F3B	BATTERY RACK GEL VRLA 7y AC UPS 35kVA	1050	725	1272	914	
5	BA-200F4A	BATTERY RACK GEL VRLA 7y AC UPS 15kVA	1890	725	1761	3429	
6	BA-200F4B	BATTERY RACK GEL VRLA 7y AC UPS 15kVA 01	1890	725	1761	3429	
7	CB-200F3A	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
8	CB-200F3B	ISOLATOR BOX AC UPS 35kVA	450	341	632	100	
9	CB-200F4A	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
10	CB-200F4B	ISOLATOR BOX AC UPS 15kVA	450	341	632	100	
11	NC-200F2	NAVAID PANEL 01	1000	800	2600	535	
12	BA-200F2	BATTERY BOX NAVAID	958	993	1210	1552	
13	CB-200F2	ISOLATOR BOX NAVAID	500	400	765	70	
14	B3000-HSB-001	DISTRIBUTION & HVAC PANEL - AC/UPS ROOM	1600	600	2300	1150	
15	-	EYE WASH STATION	228	80	290	5	
16	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
17	-	PORTABLE EXTINGUISHER (CO2) 5 Kg.	150	150	750	20	
18	BC-200F2	BATTERY CHARGER NAVAID 01	-	-	-	-	INCLUDED IN THE RACK OF NC-200F2

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20106

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

ROSETTI MARINO SpA



NOTES

01
1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. EQUIPMENT DIMENSION ARE DEFINED ACCORDING TO THE LATEST DRAWING AND INFORMATION FROM THE VENDOR
3. DOCUMENT VALID ONLY FOR ELECTRICAL COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.
   - "B-300" – GENERAL ARRANGEMENT DRAWING DOC. N. 1724000049-AR-DA-00016
   - "B-300" – DETAILED DRAWINGS DOC. N. 1724000049-AR-DD-00020

LEGEND

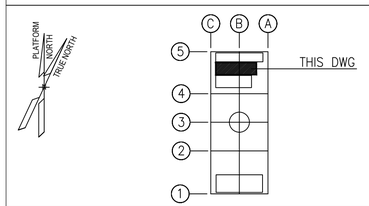
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR – WIDTH 800mm.
_____ MAINTENANCE AREA – VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

HOLDS

REFERENCE

DOCUMENT TITLE	DOCUMENT NUMBER
"B-300" GENERAL ARRANGEMENT DRAWING	1724000049-AR-DA-00016
"B-300" DETAILED DRAWINGS	1724000049-AR-DD-00020
"B-300" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS	123A90-DDL-AR-DL-10022
PLOT PLAN – LOWER & UPPER DECK	123A90-DDL-PP-DL-70070

KEY PLAN



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	23/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	28/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

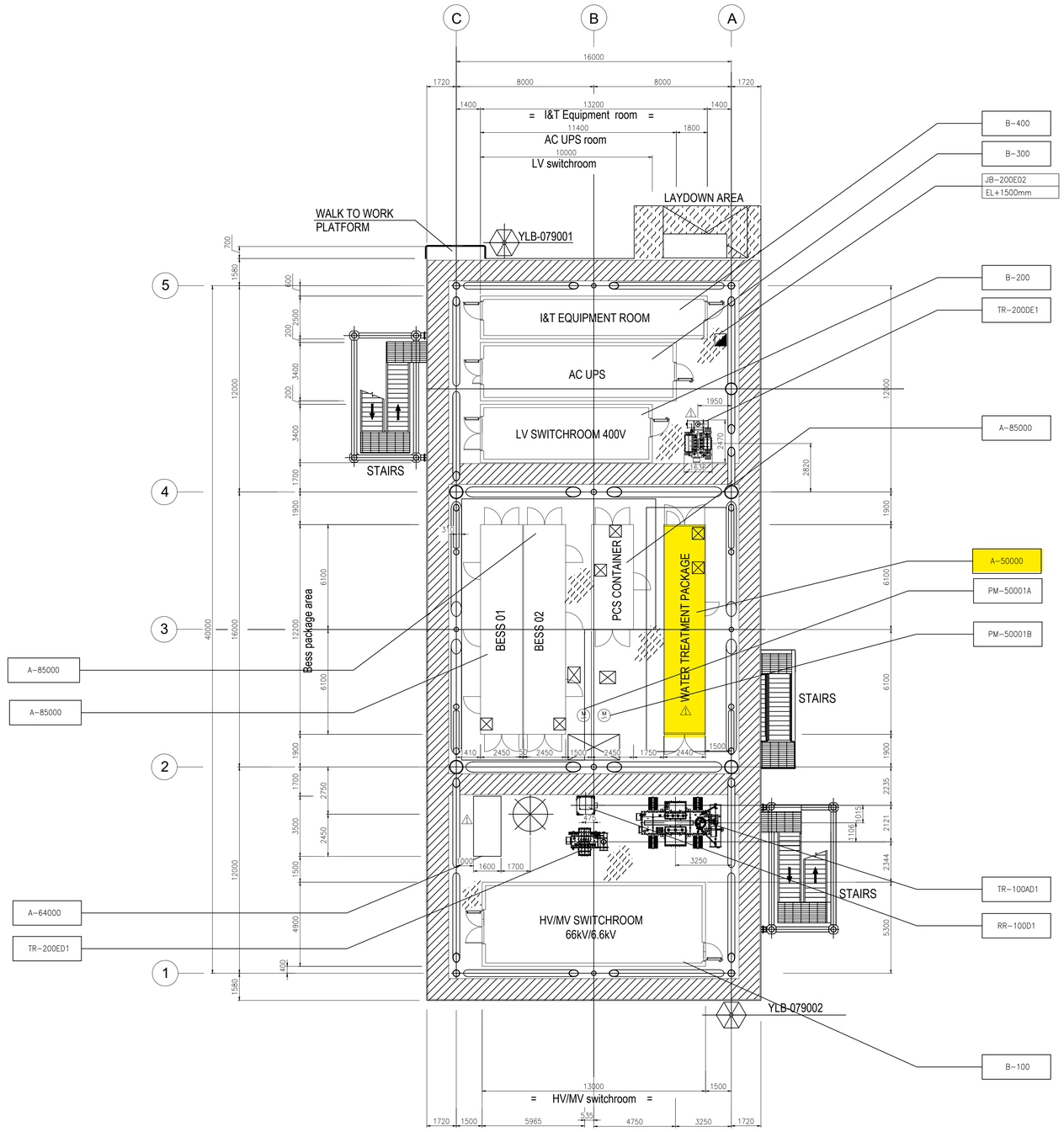
CROSSWIND
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
UPSs & BATTERIES SWITCHROOM

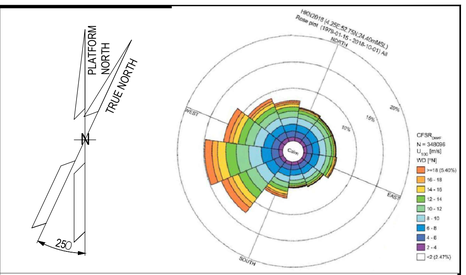
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 23/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20106	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20106 REV. 01

File Name : 123A90-DDL-EL-DL-20106 Rev.00.dwg



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

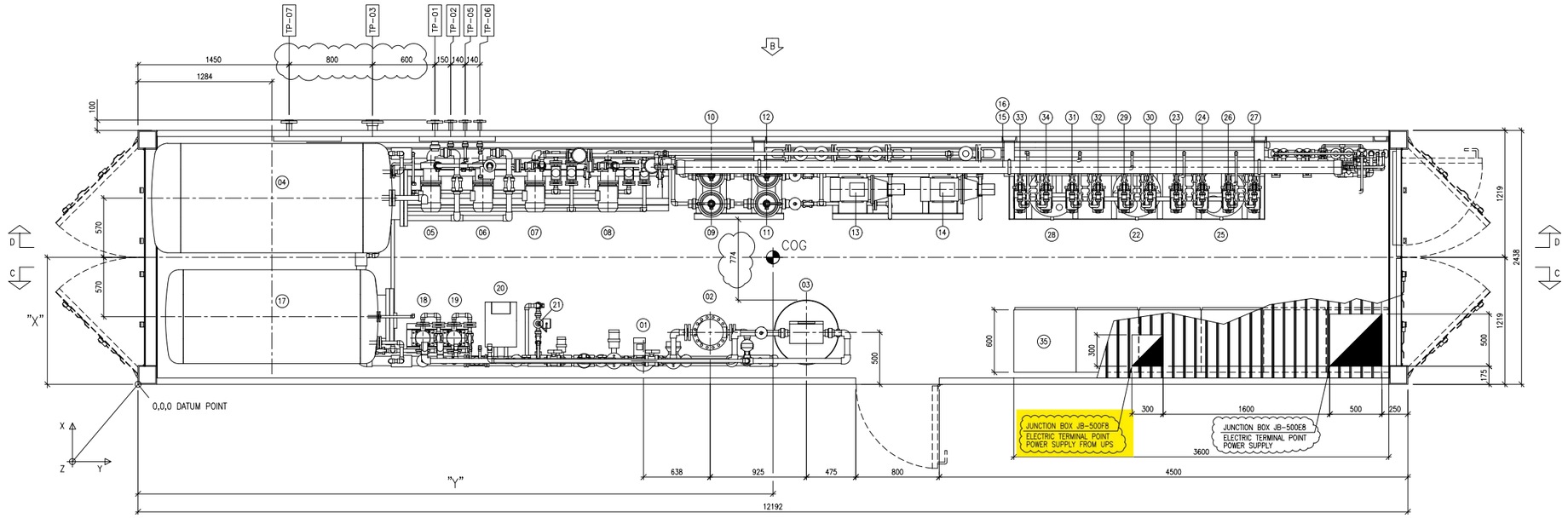
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

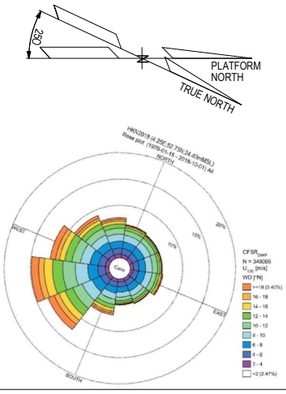
DRAWING NO. 123A90-DDL-EL-DL-20101
REV. 01
File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

DRAWING NO. 1724000448-MAC-DA-00005

REV. 2



PLAN



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg	
DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

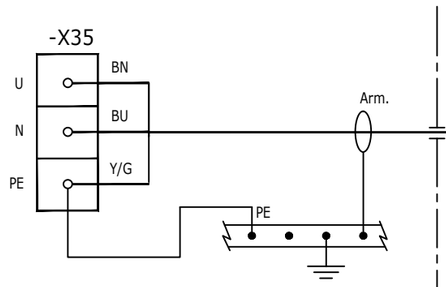
TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-PLANS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 001	REV. 2

File Name : 1724000448-MAC-DA-00005_Sh.01 rev2

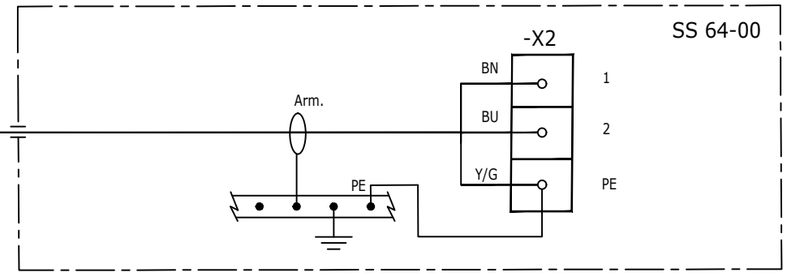
FROM	TO

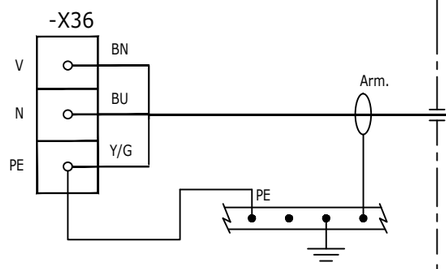
DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: DP-200F3



84312-CEL
3G2.5 mm²

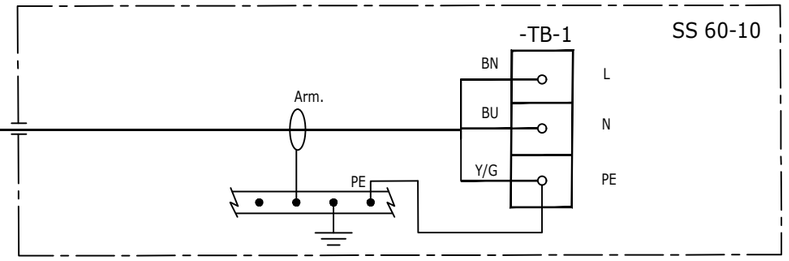
DESCRIPTION: UCP - N2 PACKAGE
TAG NUMBER: CP-640E1



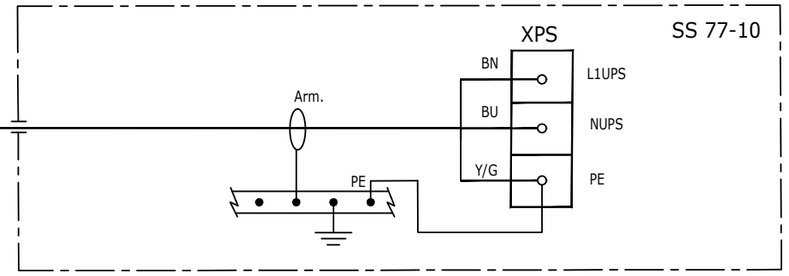


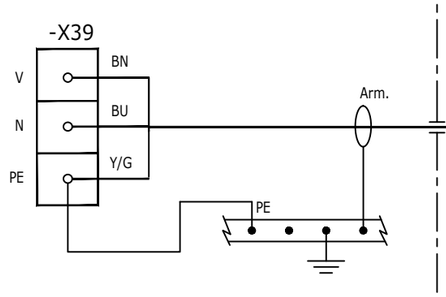
84313-CEL
3G2.5 mm²

DESCRIPTION: UCP - WATER PACKAGE
TAG NUMBER: JB-500F8



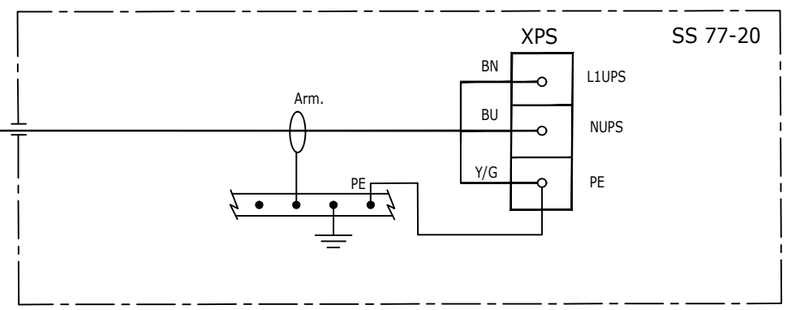
DESCRIPTION: UCP - HVAC HV ROOM
TAG NUMBER: B100-HSB-001

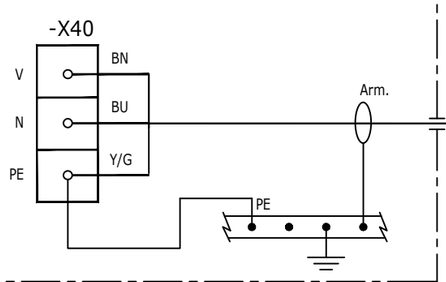




84314-CEL
3G2.5 mm²

DESCRIPTION: UCP - HVAC LV ROOM
TAG NUMBER: B200-HSB-001





84315-CEL
3G2.5 mm²

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DG-20149
REV.: 2_A | DATE: 21/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
AC UPS – PAS DB DP-200F3

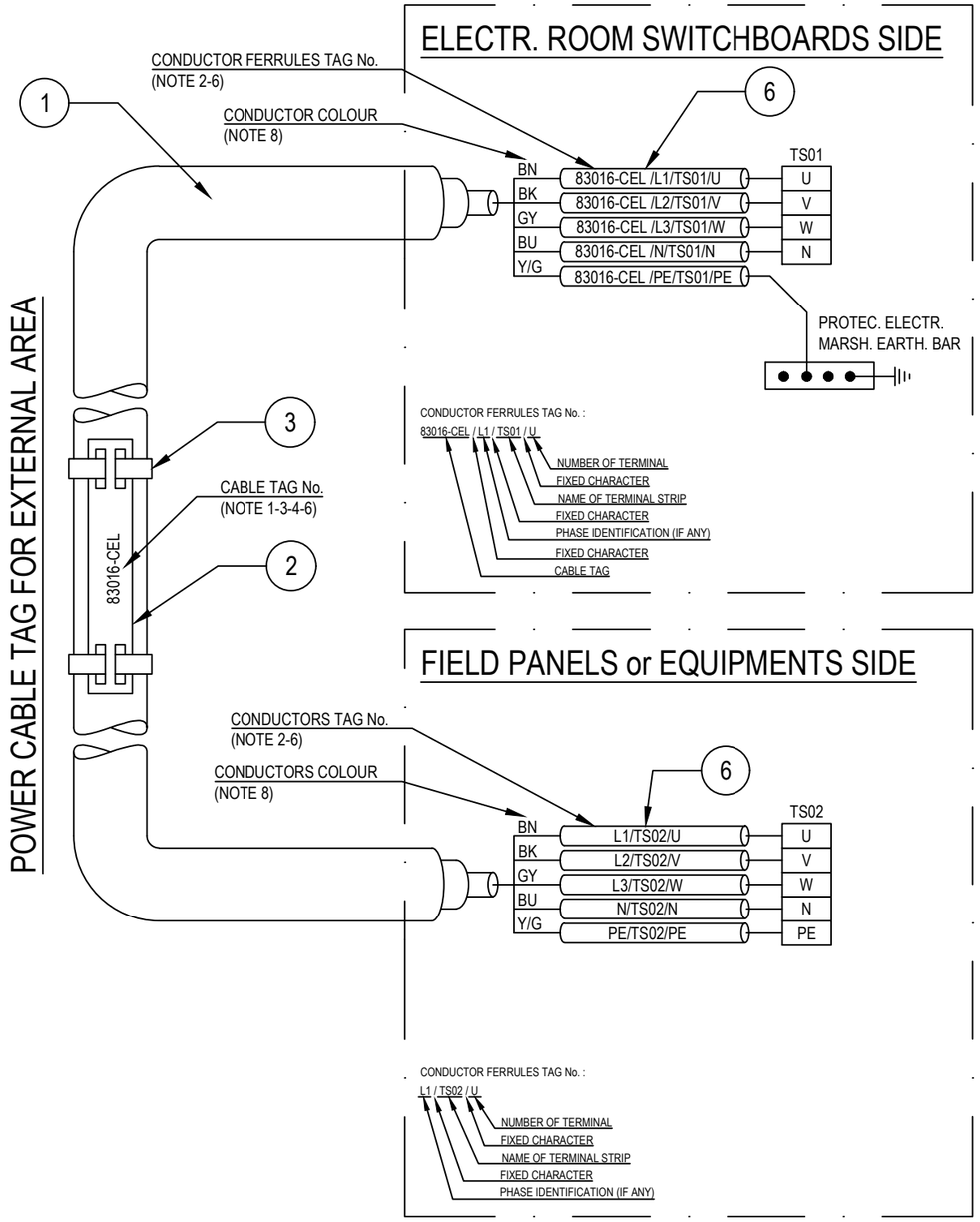
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 041 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20149 Rev. 02

C02



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	UNARMOURED CABLE				
2	CABLE TAG FOR EXTERNAL AREA	HDG/SS			NOTE 1 NOTE 4
3	TIE FOR CABLE TAG IN EXTERNAL AREA	HDG/SS			
4	CABLE TAG FOR INTERNAL AREA	PVC			NOTE 1 NOTE 5
5	TIE FOR CABLE TAG IN INTERNAL AREA	NYLON 6.6			
6	CORE FERRULES	PVC			

NOTES:

1) ALL CABLES SHALL BE IDENTIFIED AT EACH TERMINATION AND EACH SIDE OF ANY OBSTACLE (E.G. CABLE TRANSIT ON WALLS INSIDE SHELTER AND FLOOR DECK CROSSING, BY THEIR RESPECTIVE TAGS/NUMBERS, AS INDICATED ON THE CABLE SCHEDULE.
CABLE IDENTIFICATION SHALL BE ALSO DONE BELOW AND IN THE SWITCHBOARD CABLE COMPARTMENT.

2) CABLE CORE FERRULES SHALL BE FITTED AT EVERY TERMINATION. THESE FERRULES SHALL BE OF ENGRAVED PLASTIC SLIP ON, INTERLOCKED AND SELF GRIP TYPE.

3) ON CABLE TRAYS OR LADDERS, CABLES SHALL BE IDENTIFIED AT EACH END, AND EVERY 25 METERS.

4) THE CABLE TAG FOR EXTERNAL AREA SHALL DONE BY 316L STAINLESS STEEL LABELS, TAG (H=5mm) SHALL BE LASER PRINTED PREFERABLY OR EMBOSSED, LABEL HELD BY TWO 316L STAINLESS STEEL TIES.

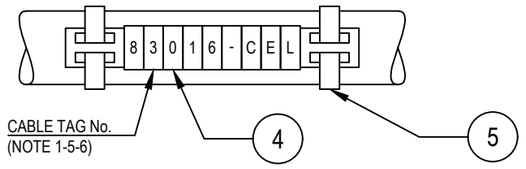
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

6) CABLE AND CONDUCTOR TAG ARE INDICATIVE ONLY.

7) WITHIN TECHNICAL BUILDING, PROTECTIVE CONDUCTOR SHALL BE TAGGED BETWEEN FOLLOWING ITEMS:
- PANEL (SWITCHBOARD, SWITCHGEAR, DISTRIBUTION BOARD, ETC) AND EARTH BAR
- EARTH BAR AND EARTH BOSS

8) ONLY IF NECESSARY, SHRINK TUBES OF THE APPROPRIATE COLOR WILL BE INSTALLED TO COVER THE WRONG CONDUCTOR COLOR, THIS WILL BE PERFORMED IN EACH SIDE OF THE CABLES WHERE NECESSARY.

POWER CABLE TAG FOR INTERNAL AREA



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20092
REV.: 2_A | DATE: 28/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	28/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	04/07/24	NLK	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-POWER SYSTEM & CABLE INSTALLATION
CABLES INSTALLATION SYSTEM IDENTIFICATION FOR POWER CABLES

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20092 | SHEET 007 | REV. 02

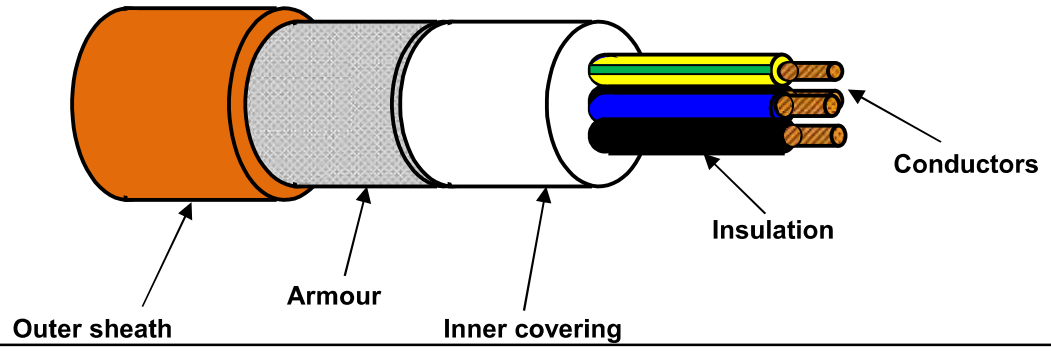
F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20092 REV.02.DWG

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
84313-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						DP-200F3	AC UPS 35 kVA Distribution Board	Lower Deck (B-300)	JB-500F8	UCP - Water Package	Lower Deck	ELECV19-3G2,5	Cable Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1kV 3G2,5mm² - Orange	M20	T2_M20_Double			T2_M20_Double				L-450-101-LVT-040 / L-600-101-LVT-036 / L-600-101-LVT-038 / L-600-101-LVT-035 / E-MCT-302 / L-450-101-LVT-005 / L-600-101-LVT-010 / L-750-101-LVT-015 / L-750-101-LVT-013 / L-750-101-LVT-014 / L-150-101-LVT-093 / L-150-101-LVT-111

Cu Cl.2/MGT/EPR/LSZH/GSWB/LSZH 0,6/1 KV

3G2,5 - L.V. POWER CABLE - Fire Resistant & Flame Retardant - ARMOURED



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires	IEC 60228 Class 2
Insulation :	Mica/Glass Tape (MGT) plus EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 mm	
Cores colour code :	**Brown - Blue - Yellow/Green**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not Required	
Total Assembling :	Cores layed up with optimal lay length	
Overall Wrapping:	Not required	
Drain wire :	Not required	
Overall Shield:	Not required	
Inner covering :	Extruded LSZH compound, Average Thickness 1,0 mm	
Inner covering color code:	**Black or Natural**	
Armour :	**Galvanized Steel Wire Braid Armour (coverage ≥ 90%)**	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 3G2,5 SQMM - MGT/EPR/LSZH/GSWB/LSZH - 0,6/1 KV - IEC 60331.21 - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under Armour diameter :	(11,7 ± 10%) mm	
Over Armour diameter :	(12,9 ± 10%) mm	
Outer diameter :	(15,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10	(in fixed installation)
Voltage test :	3,5 kV a.c. for 5' (Between Cores - Armour)	
Conductors DC Resistance :		IEC 60228 Class 2
Insulation Resistance :	≥ 940 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.353**	
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%)	
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 covering together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	29/03/2024	Messa			
Checked :	29/03/2024	Spaccasassi			
Approved :	29/03/2024	Cucinotta			

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

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ROSETTI MARINO

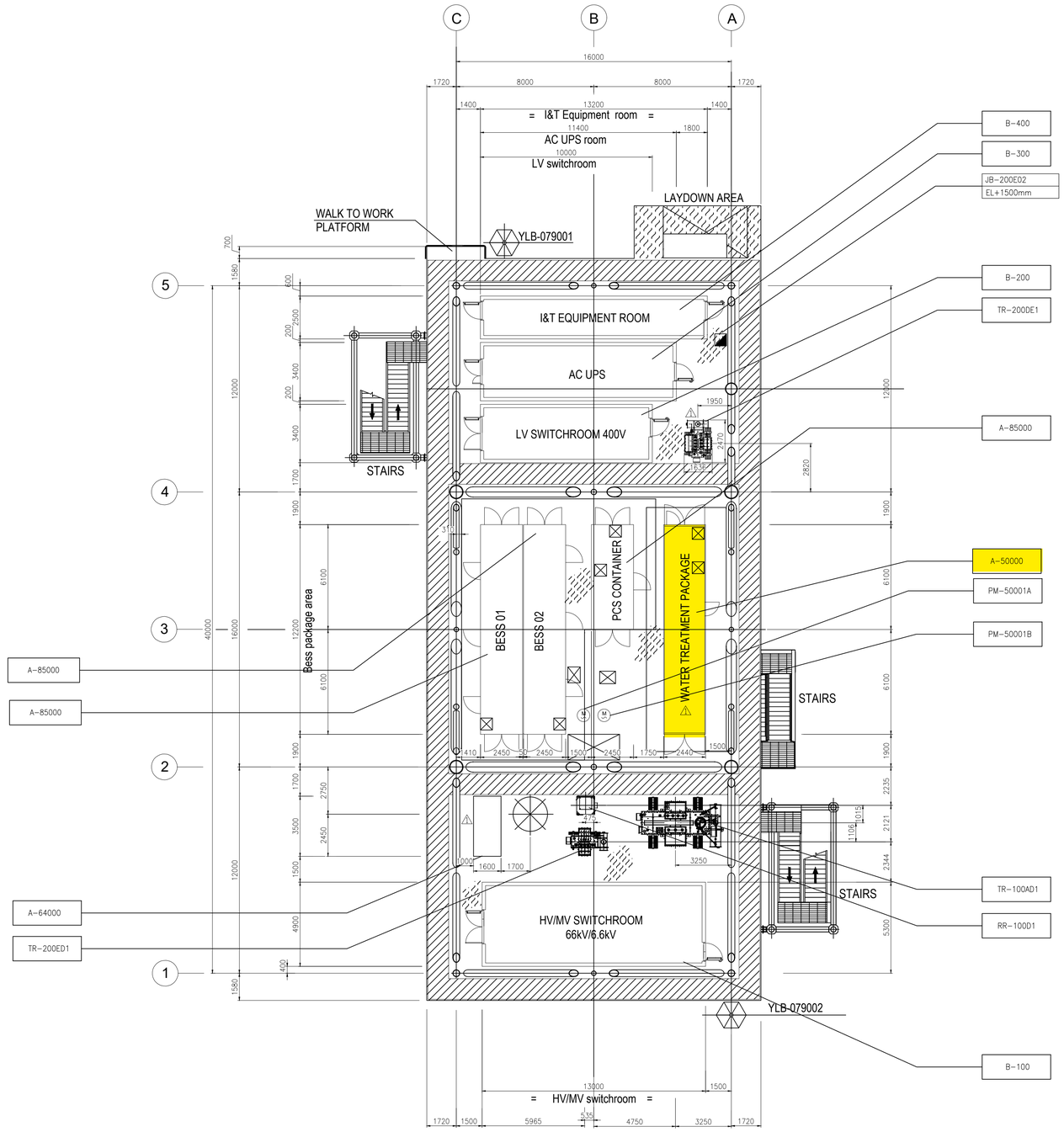
CROSSWIND

ITEM	Tag	JB-500E8	: JB Water treatment package 1			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	UD
TASK	code	C10001278		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

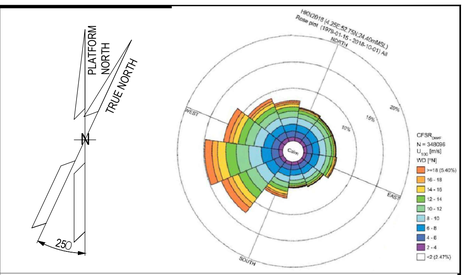
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-26	
Signature	Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:29:01.856Z	Digitaly signed by Giovanni Tangianu 2024-11-26T16:26:39.889Z	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

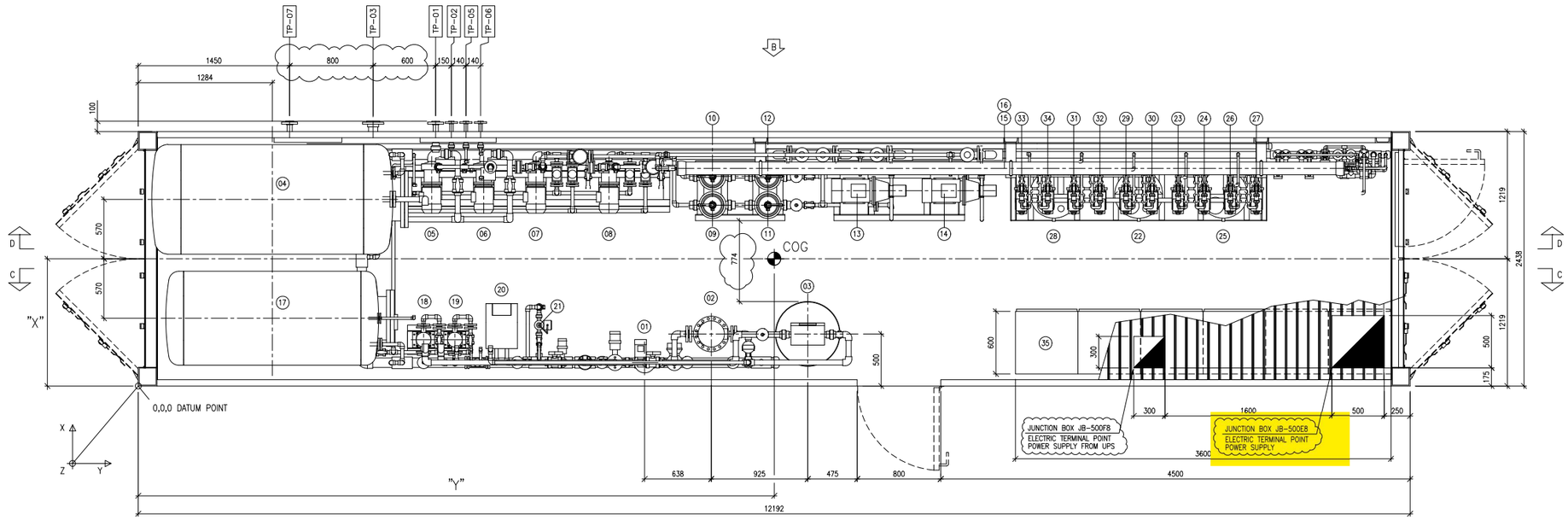
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

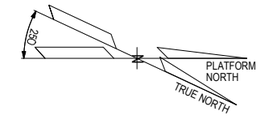
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

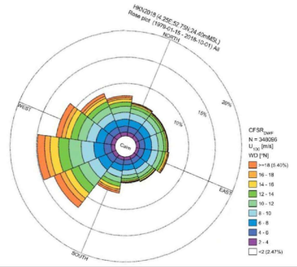
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20101
REV. 01
File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck



PLAN





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg	
DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-PLANS

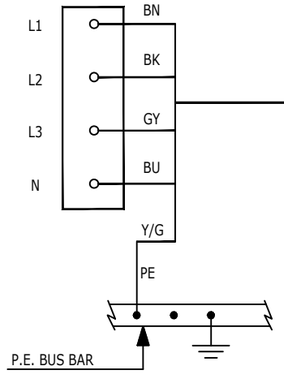
CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 001	REV. 2

File Name : 1724000448-MAC-DA-00005_Sh.01 rev2

FROM	TO

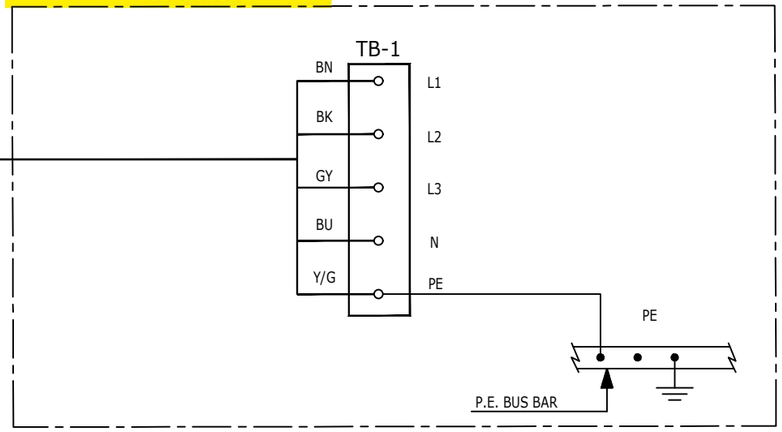
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.:A3/+08

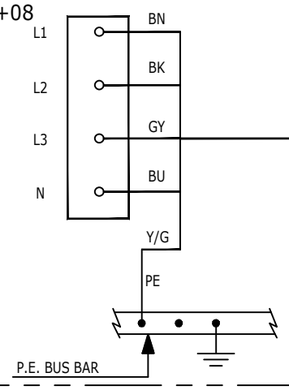


83016-CEL
5G70 mm²

DESCRIPTION: WATER PACKAGE
TAG NUMBER: JB-500E8

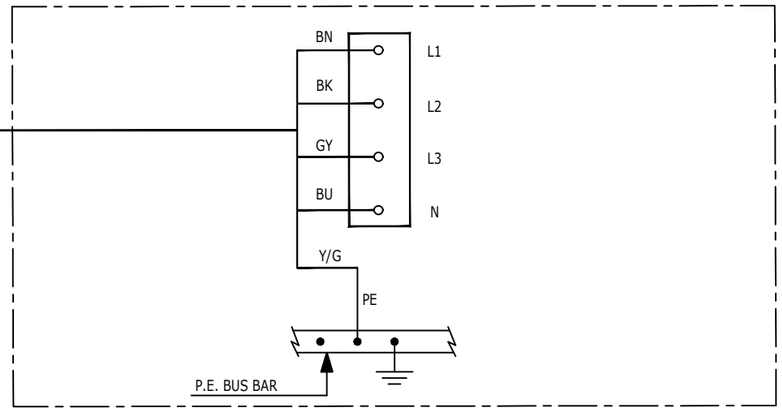


COLUMN/CUBIC.:A4/+08

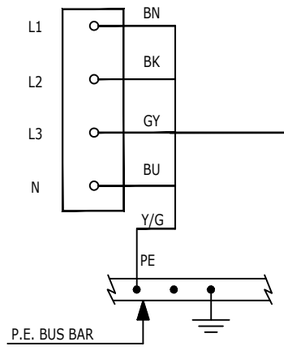


83017-CEL-1
5G70 mm²

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-A

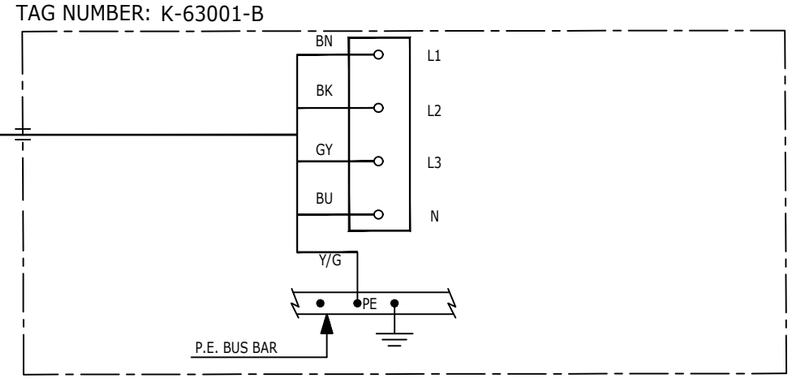


COLUMN/CUBIC.:A5/+08



83017-CEL-2
5G70 mm²

DESCRIPTION: INSTRUMENT AIR PACKAGE
TAG NUMBER: K-63001-B



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20149**

REV.:	DATE:	SIGNATURE:
2_A	21/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
LV SWITCHGEAR SG-200N1

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 023 | REV. 02

File Name : 123A90-DDL-EL-DG-20149 Rev. 02

F.to UNI A3: 420mmx297mm

FIELD - PACKAGE A-50000

INSIDE CONTAINER

OUTSIDE CONTAINER

B-200 CONTAINER LV ROOM

SG-200N1
CLA3/+08 COLUMN CUBICLE

MCC PANEL
CP-500E1

XMAIN

400/230Vac
POWER SUPPLY

1
2
3
4
PE

50001-CEL-L1
1x70mmq

50001-CEL-L2
1x70mmq

50001-CEL-L3
1x70mmq

50001-CEL-N
1x70mmq

50001-CEL-PE
1x70mmq

JUNCTION BOX
JB-500E8

PSC ◆ Customer

TB-1

L1
L2
L3
N
PE

83016-CEL
5G70mmq
(By Others)

B-300 CONTAINER UPS ROOM

DP-200F3
AC DISTRIBUTION BOARD-PAS Q14

XUPS

230Vac
UPS
POWER SUPPLY

1
2
PE

2

50002-CEL-LN
3G2,5mmq
(By Others)

JUNCTION BOX
JB-500F8

PSC ◆ Customer

TB-1

L
N
PE

84313-CEL
3G2,5mmq
(By Others)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	21/10/24	PSC	AZ	RM	ACCEPTED FOR CONSTRUCTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
A-50000 PACKAGE INTERCONNECTING DIAGRAM
400/230V POWER SUPPLY

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 005

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 02

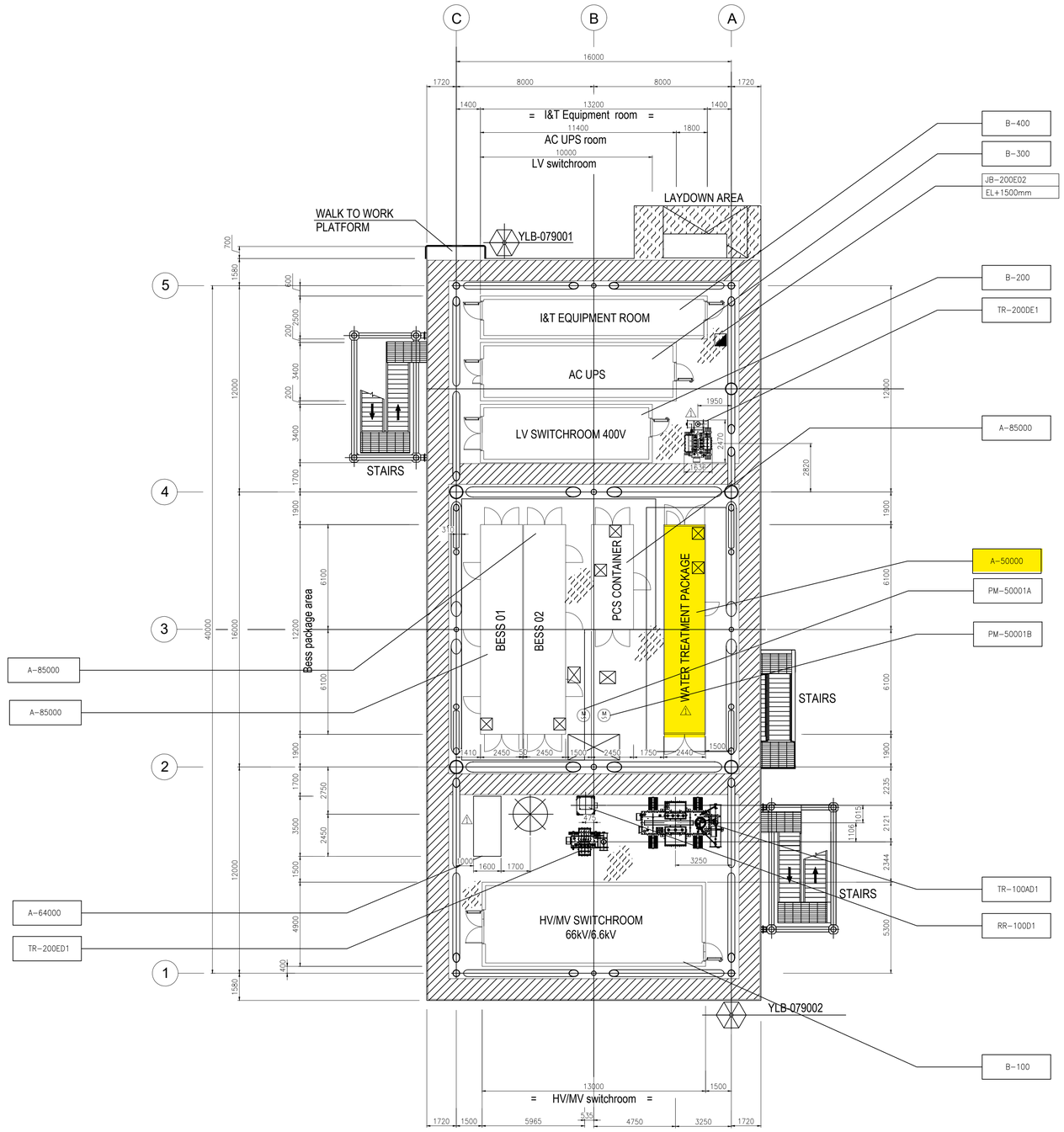
ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	JB-500F8	: JB Water treatment package 2			Dwg	123A90-DDL-EL-DL-20118
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	UD
TASK	code	C10001279		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

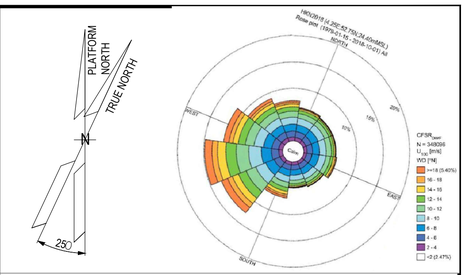
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-11-25	2024-11-26	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T16:32:51.507Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:27:45.163Z	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

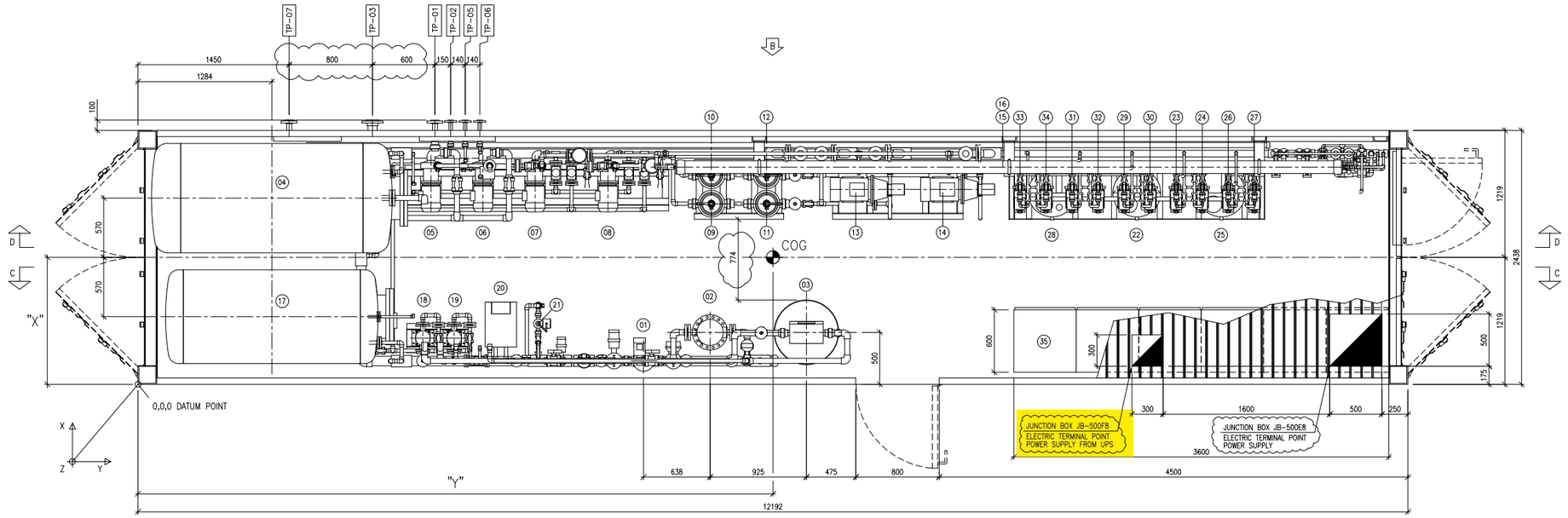
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

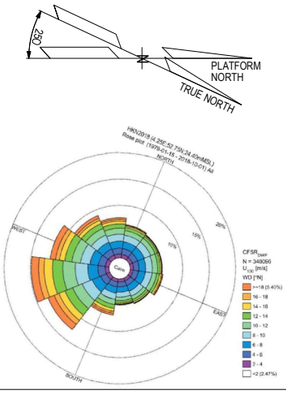
DRAWING NO. 123A90-DDL-EL-DL-20101
REV. 01
File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

DRAWING NO. 1724000448-MAC-DA-00005

REV. 2



PLAN



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg	
DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-PLANS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 001	REV. 2

File Name : 1724000448-MAC-DA-00005_Sh.01 rev2

FROM	TO

DESCRIPTION: AC UPS - PAS DB
TAG NUMBER: DP-200F3

-X35
U — BN
N — BU
PE — Y/G
Arm.
PE

84312-CEL
3G2.5 mm²

DESCRIPTION: UCP - N2 PACKAGE
TAG NUMBER: CP-640E1

SS 64-00
-X2
BN — 1
BU — 2
Y/G — PE
Arm.
PE

-X36
V — BN
N — BU
PE — Y/G
Arm.
PE

84313-CEL
3G2.5 mm²

DESCRIPTION: UCP - WATER PACKAGE
TAG NUMBER: JB-500F8

SS 60-10
-TB-1
BN — L
BU — N
Y/G — PE
Arm.
PE

-X39
V — BN
N — BU
PE — Y/G
Arm.
PE

84314-CEL
3G2.5 mm²

DESCRIPTION: UCP - HVAC HV ROOM
TAG NUMBER: B100-HSB-001

SS 77-10
XPS
BN — L1UPS
BU — NUPS
Y/G — PE
Arm.
PE

-X40
V — BN
N — BU
PE — Y/G
Arm.
PE

84315-CEL
3G2.5 mm²

DESCRIPTION: UCP - HVAC LV ROOM
TAG NUMBER: B200-HSB-001

SS 77-20
XPS
BN — L1UPS
BU — NUPS
Y/G — PE
Arm.
PE

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DG-20149**

REV.:	DATE:	SIGNATURE:
2_A	21/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	19/11/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	16/10/24	SAI	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/07/24	SAI	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL INTERCONNECTING WIRING DIAGRAM
AC UPS – PAS DB DP-200F3

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

SCALE : 1:X

A3

DRAWING NO. 123A90-DDL-EL-DG-20149

SHEET 041

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DG-20149 Rev. 02

FIELD - PACKAGE A-50000

INSIDE CONTAINER

OUTSIDE CONTAINER

B-200 CONTAINER LV ROOM

SG-200N1
CLA3/+08 COLUMN CUBICLE

MCC PANEL
CP-500E1

XMAIN

400/230Vac
POWER SUPPLY

1
2
3
4
PE

50001-CEL-L1
1x70mmq

50001-CEL-L2
1x70mmq

50001-CEL-L3
1x70mmq

50001-CEL-N
1x70mmq

50001-CEL-PE
1x70mmq

JUNCTION BOX
JB-500E8

PSC ◆ Customer

TB-1

L1
L2
L3
N
PE

83016-CEL
5G70mmq
(By Others)

B-300 CONTAINER UPS ROOM

DP-200F3
AC DISTRIBUTION BOARD-PAS Q14

JUNCTION BOX
JB-500F8

PSC ◆ Customer

TB-1

XUPS

230Vac
UPS
POWER SUPPLY

1
2
PE

2

50002-CEL-LN
3G2,5mmq
(By Others)

L
N
PE

84313-CEL
3G2,5mmq
(By Others)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	21/10/24	PSC	AZ	RM	ACCEPTED FOR CONSTRUCTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
A-50000 PACKAGE INTERCONNECTING DIAGRAM
400/230V POWER SUPPLY

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 005

REV. 02

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 02

ITEM	Tag	A-50000	: Water Treatment Package		Dwg	1724000448-MAC-DA-00005	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD	
TASK	code	C10002349	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Electrical	Form	CZX01E	Package - E

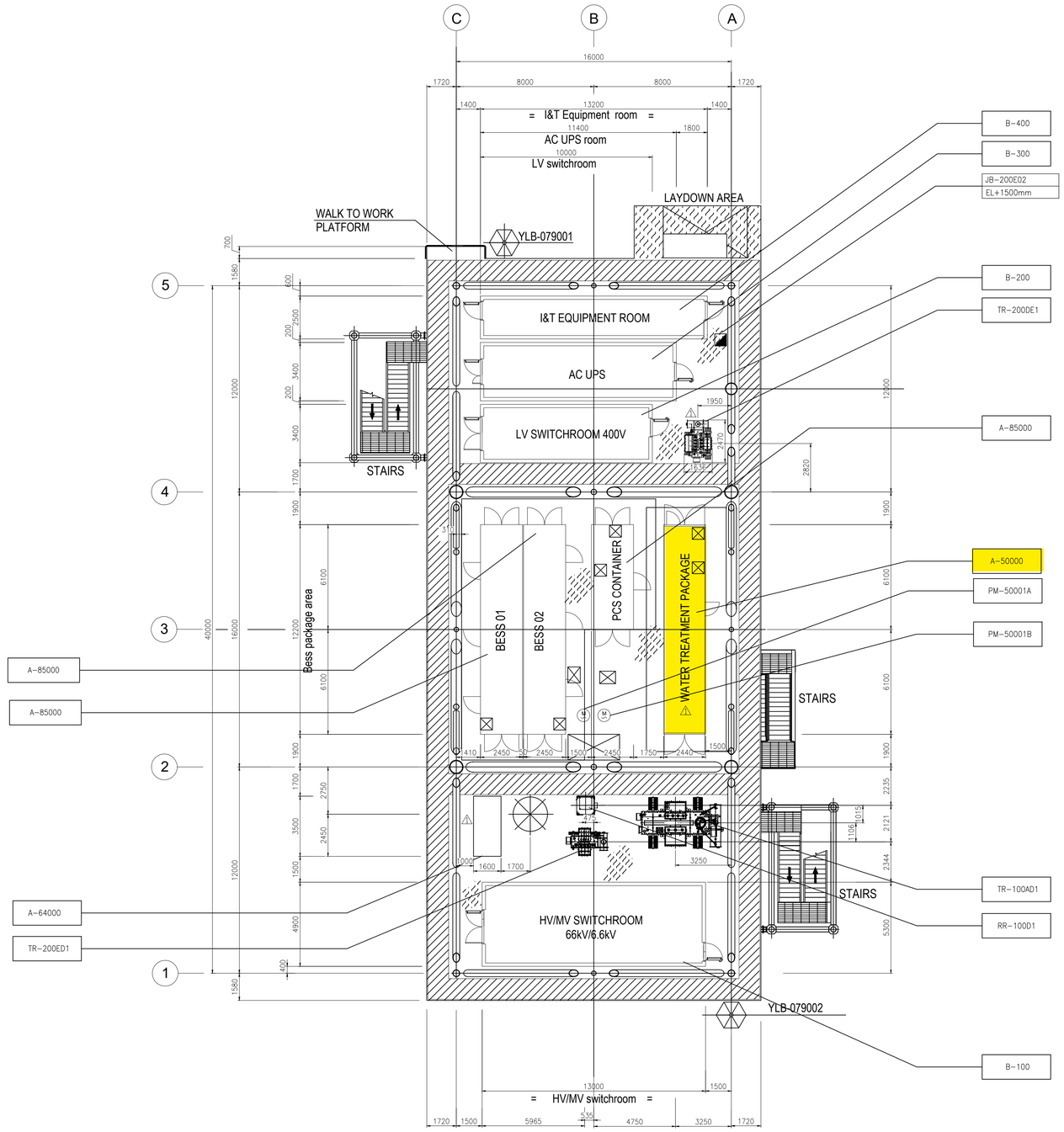
1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	OK
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	OK
4	Check that all equipment has been earthed and bonded.	PL
5	Check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

Comments:

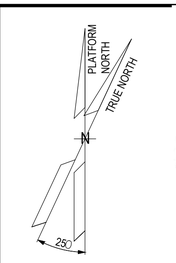
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-26	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:37:58.627Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:44:12.344Z	

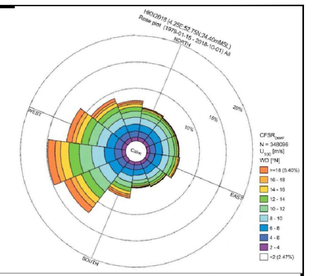
DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



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





NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

ROSETTI MARINO SpA

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

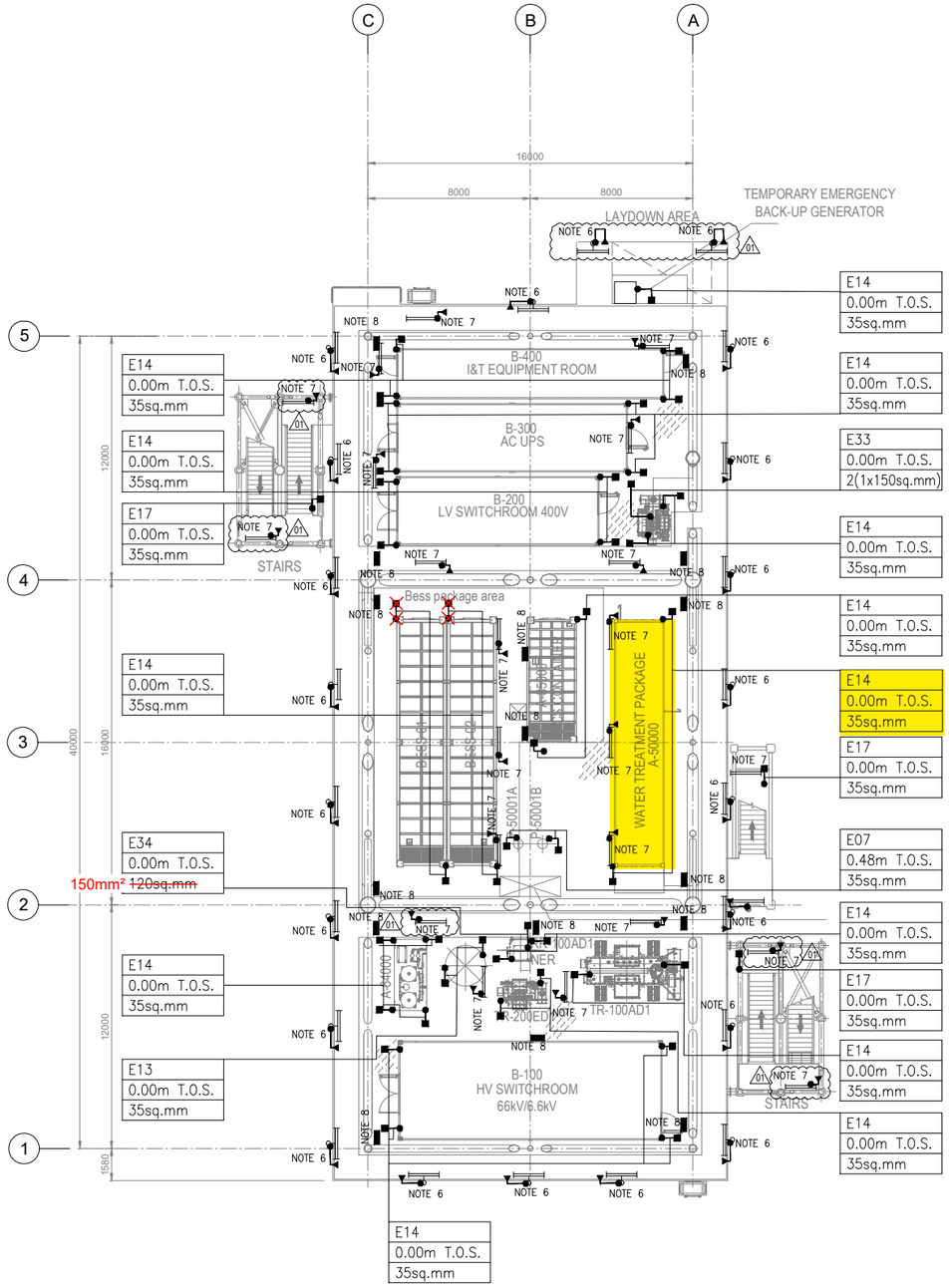
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

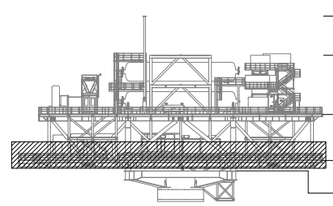
DRAWING NO. 123A90-DDL-EL-DL-20133

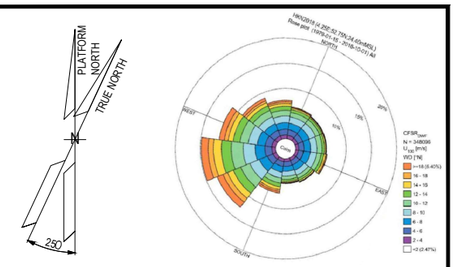
REV. 01



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

KEY PLAN





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DOCUMENT IS ONLY VALID FOR EARTHING LAYOUT.
4. ALL ELECTRICAL EQUIPMENT NOT DIRECTLY WELDED TO SKID FRAME SHALL BE BONDED TO STEEL TO THE STRUCTURE OF SKID BASEFRAME.
5. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER TO THE DOCUMENT 123A90-DDL-EL-RE-20154.
6. ALL NON-WELDED POLES WILL BE EARTHED AS PER TYPICAL E05 AND E24. 01
7. ALL LINEAR LIGHTING FIXTURE WILL BE EARTHED AS PER TYPICAL E32.
8. EARTH BAR WILL BE FIXED TO THE PRIMARY BEAMS OF THE UPPER DECK. COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D / 6.00M T.O.S. / 35 SQ MM.
9. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE

LEGEND

- LIGHTING FIXTURE POLE MOUNTED
- LINEAR LIGHTING FIXTURE
- EARTHING BOSS AISI316L
- COMPRESSION TYPE LUG TINNED COPPER
- THREADED STUD FOR EARTHING CONNECTION
- Exx EARTHING TYPICAL CODE
- EARTHING BAR

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS - EARTHING SYSTEM
123A90-DDL-EL-RE-20154	LIGHTNING PROTECTION SYSTEM CALCULATION REPORT
123A90-DDL-EL-DL-20119	LIGHTING & SOCKET LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 25/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20133	SHEET 001	REV. 01

SHEET 001 OF 002

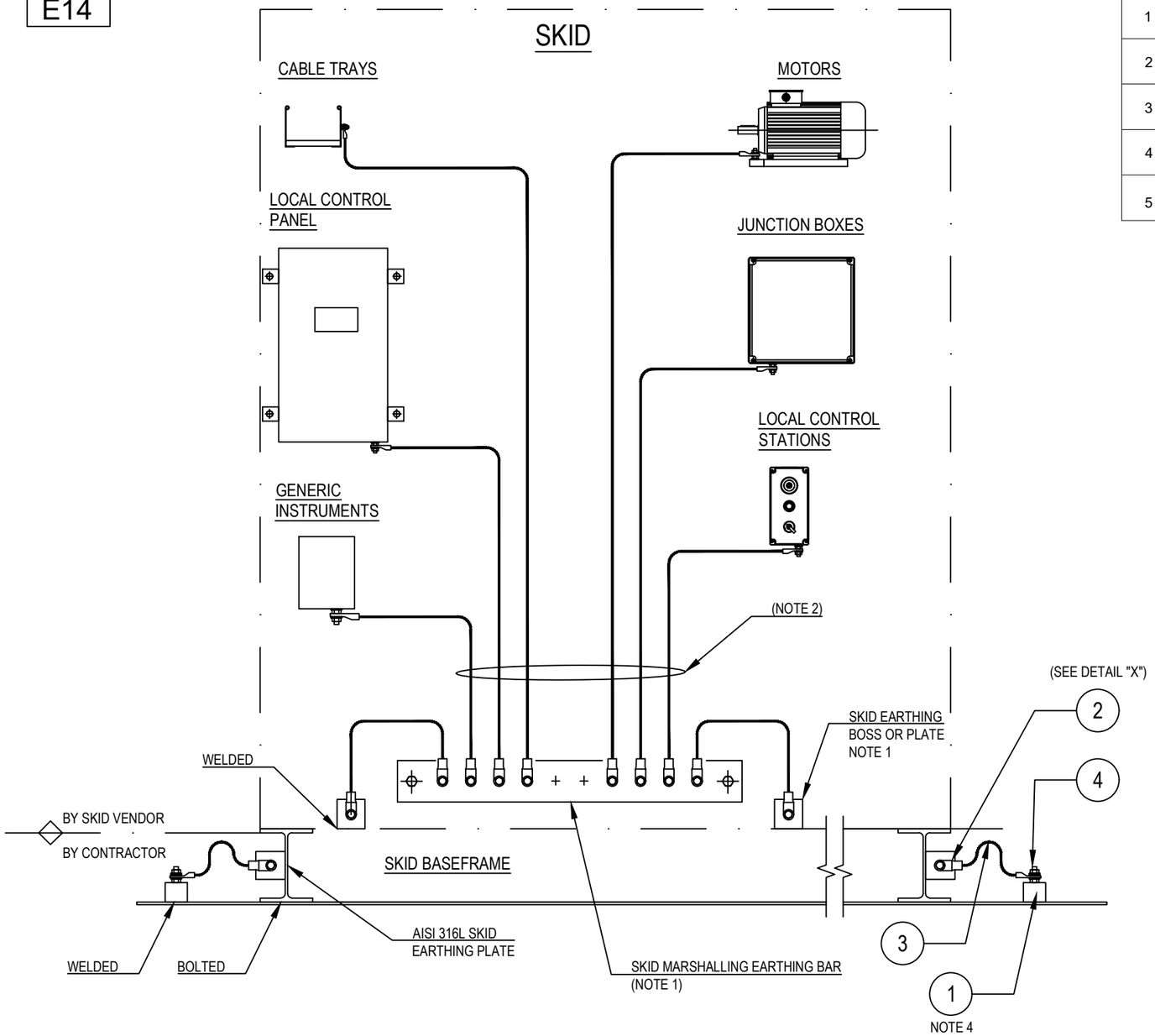
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20133**

REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

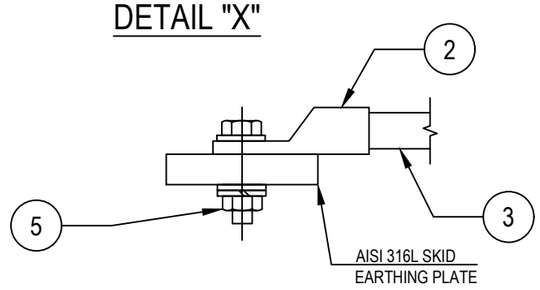
File Name : 123A90-DDL-EL-DL-20133

E14



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50		NOTE 5
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm^2		NOTE 3
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm^2		NOTE 3
4	STUD BOLT WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L	M10X50		
5	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30		

DETAIL "X"



NOTES:
1) EARTHING BAR/BOSS/PLATE SUPPLIED BY SKID MANUFACTURER
2) ALL EQUIPMENTS AND CABLE TRAYS WILL BE EARTHING ON SKID EARTHING BAR BY SKID MANUFACTURER
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY~~
4) FOR EARTHING BOSS TYPICAL DETAIL E11A
5) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

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

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR SKID BASEFRAME

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

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

DRAWING NO. DRAWING_NO.

REV. REV

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr

GAS CONFIRMED 50 XA 001 — F&G
SMOKE CONFIRMED 50 XA 002 — F&G
FAULT PACKAGE 50 XA 003 — ESD
50-XS-001 SHUT-DOWN — ESD
NOTE 6

CONTRACTOR | SUPPLIER

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
50 TT 001
50 TE 001
03
BLPH-MV-471
SD LO
NOTE 7
1"-SWS-290-01SD-E
1.1/2"
TP 017 50
E
4"x1.1/2"
4"x1.1/2"
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
ECC. RED.
ECC. RED.
BLPH-MV-241
3/4"

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005 50 03
123A90-DDL-PR-PID-80021
TO SEA WATER LIFT PUMP AND LIFT PUMP CAISSONS
1"-CI-029-01CP-E

1"-CI-043-01CP-E
TP 006 50 03
DECK
HOOK-UP 003
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

SUPPLIER | CONTRACTOR

TP 003 50 03
1.1/2"x1"
3"x1.1/2"
1"-SWR-045-01CS-H
123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

TP 007 50 03
1.1/2"x1"
1"-WW-038-01CS-H
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
7. ROUTED TO THE SEA. 03

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80022	SHEET 001	REV. 03

File Name : FILE_NAME

WTP FIRE AND GAS PANEL WIRING DIAGRAM
WATER TREATMENT PACKAGE

PSC

DOC. REF: PK2885-A-006

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	07/10/24	SIA	PSC	RM	ISSUE FOR REVIEW (IFR)

TITLE : WTP FIRE AND GAS PANEL WIRING DIAGRAM
WATER TREATMENT PACKAGE
COVER PAGE

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

SCALE : NTS

A3

DRAWING NO. 1724000448-MAC-DG-00036

SHEET 001

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1724000448-MAC-DG-00036 Rev. 00

REV.	DATA DATE	DESCRIZIONE DESCRIZIONE	DISEGN. DRAWN	CONTR. CHECK.	APPROV. APPROV.
1	23/09/2024	FOR CONSTRUCTION	D.O.	T.Z.	C.T.
0	16/08/2024	FOR APPROVAL	D.O.	T.Z.	C.T.

SIA® FIRE FIGHTING SYSTEMS

S.I.A. - Safety Industrial Applications s.r.l.

Via Aldo Moro 6 20005 Pogliano Milanese (MI) – ITALY
Tel.: +39 02 35969811 – Fax: +39 02 93549537
Web: www.sia-italia.com E-mail: info@sia-italia.com

CLIENTE / CUSTOMER: PSC S.p.A.

PROGETTO / PROJECT: FIRE & GAS DETECTION SYSTEM FOR ELECTRICAL CONTAINER

COMMESSA N° / JOB N°: C24032

ARCHIVIO / FILE: C24032-WID-001_R1

A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

THIS DRAWING IS LEGALLY EXCLUSIVE PROPERTY OF SIA S.r.l. AND CANNOT BE REPRODUCED NEITHER SHOWN TO A THIRD PARTY WITHOUT WRITTEN ASSENT

TITOLO / TITLE:

SIA-5319 CONTROL PANEL

WIRING AND DIMENSIONAL DRAWING

DISEGNO N° / DRAWING N°	FORM	SCALA / SCALE	FOGLIO / FOGLIO	DI / OF
C24032-WID-001	A3	--	1	21

REVISION INDEX

Sheet	Description	Revision 0	1	2	3
1	COVER	X	X		
2	REVISION INDEX	X	X		
3	WIRES COLOUR CODE AND STANDARDS	X			
4	POWER SUPPLY DISTRIBUTION	X			
5	SIA-5319-RACK-R SLOT S-0	X			
6	24V POWER SUPPLY DISTRIBUTION	X			
7	RACK CONNECTIONS	X			
8	RACK 5319 SIA-R	X			
9	SIA-5319-RACK-R SLOT 1/2	X			
10	SIA-5319-RACK-R SLOT 3/4	X			
11	SIA-5319-RACK 1 SLOT 0	X			
12	SIA-5319-RACK 1 SLOT 1/2/3	X			
13	SIA-5319-RACK 1 SLOT 4/5/6	X	X		
14	SIA-5319-RACK 1 SLOT 7/8/9	X			
15	SIA-5319-RACK 1 SLOT 10/11/12	X			
16	SIA-5319-RACK 1 SLOT 13	X			
17	RACKS DETAIL	X			
18	FRONT & SIDE VIEW	X			
19	TOP & BOTTOM VIEW	X			
20	INTERNAL MOUNTING PLATE VIEW	X	X		
21	MATERIAL LIST	X	X		
22	DEVICES TYPICAL CONNECTION	X	X		
23					
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REVISION INDEX

Sheet	Description	Revision 0	1	2	3	4	5	6
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REFERENCE DRAWINGS

DOC.No.	DESCRIPTION
C24032-DSH-001	FIRE & GAS SYSTEM INSTRUMENT DATASHEET
C24032-BLK-001	FIRE & GAS SYSTEM BLOCK DIAGRAM
C24032-LAY-001	FIRE & GAS SYSTEM LAYOUT

GENERAL NOTES

1) ISOLATED BARS ARE MOUNTED NEAR TERMINAL STRIPS FOR CABLE SHIELDS CONNECTIONS.

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TITOLO
WIRING & DIMENSIONAL DRAWING REVISION INDEX
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	2	3

ELECTRICAL SYMBOLS

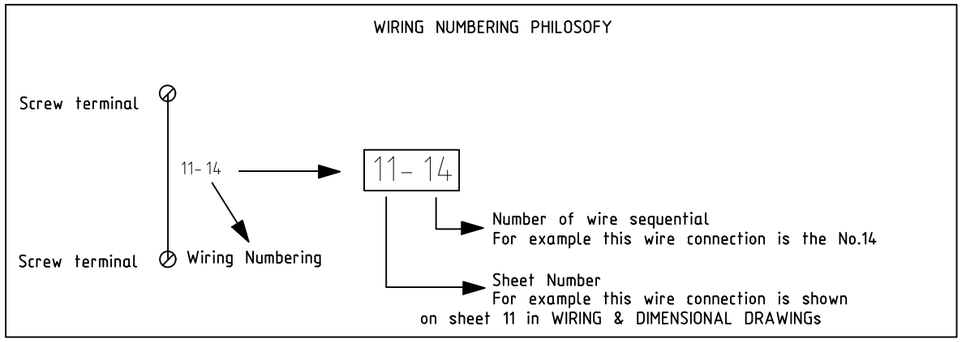
SYMBOL	DESCRIPTION
Fx	FUSED SWITCH
QFx	AUTOMATIC SWITCH
PE	PROTECTION EARTH
IE	INSTRUMENT EARTH
BATT+	BATTERIES
Ux xxA +V −V	POWER SUPPLY
CB xxA +V −V	BATTERY CHARGER
R	TEST BATTERY RESISTOR
⊘	TERMINAL WITH SCREW
TSxx	TERMINAL BOARD LABEL
BZ	LOCAL SOUNDER
FL	POWER SUPPLY FILTER

WIRING IDENTIFICATION

DESCRIPTION	IDENTIFIC.	COLOUR	TYPE & WIRING SIZE (mm2)
AC PHASE	L	BROWN	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5
AC NEUTRAL	N	BLUE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5 & 1.5
PROTECTION EARTH	PE	YELLOW/GREEN	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5 & 6
POSITIVE DC POWER	+	RED	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1.5
NEGATIVE DC POWER	-	BLACK	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1.5
DC SIGNAL		WHITE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1
RELAY SIGNAL (FREE VOLTAGE)		ORANGE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1

ACCORDING TO: CEI EN 60445
ALL INTERNAL WIRES: CPR Compliant 305/2011/EU (Standard: EN50575:2014+A1:2016 Class Cca-S3, d1, a3)

WIRING NUMBERING PHILOSOFY



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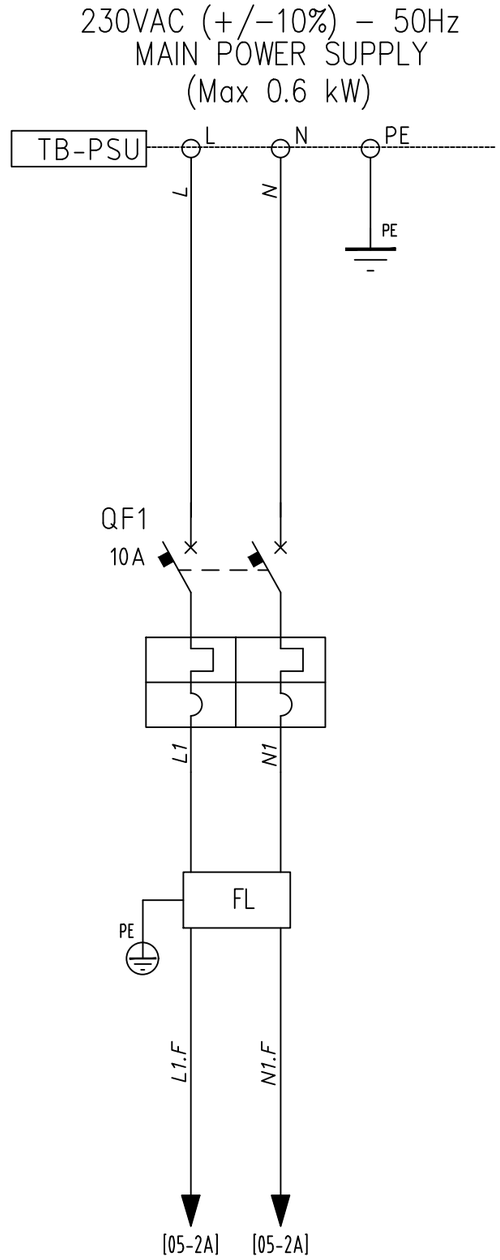
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TITOLO
WIRING & DIMENSIONAL DRAWING
WIRES COLOUR CODE AND STANDARDS
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	3	4



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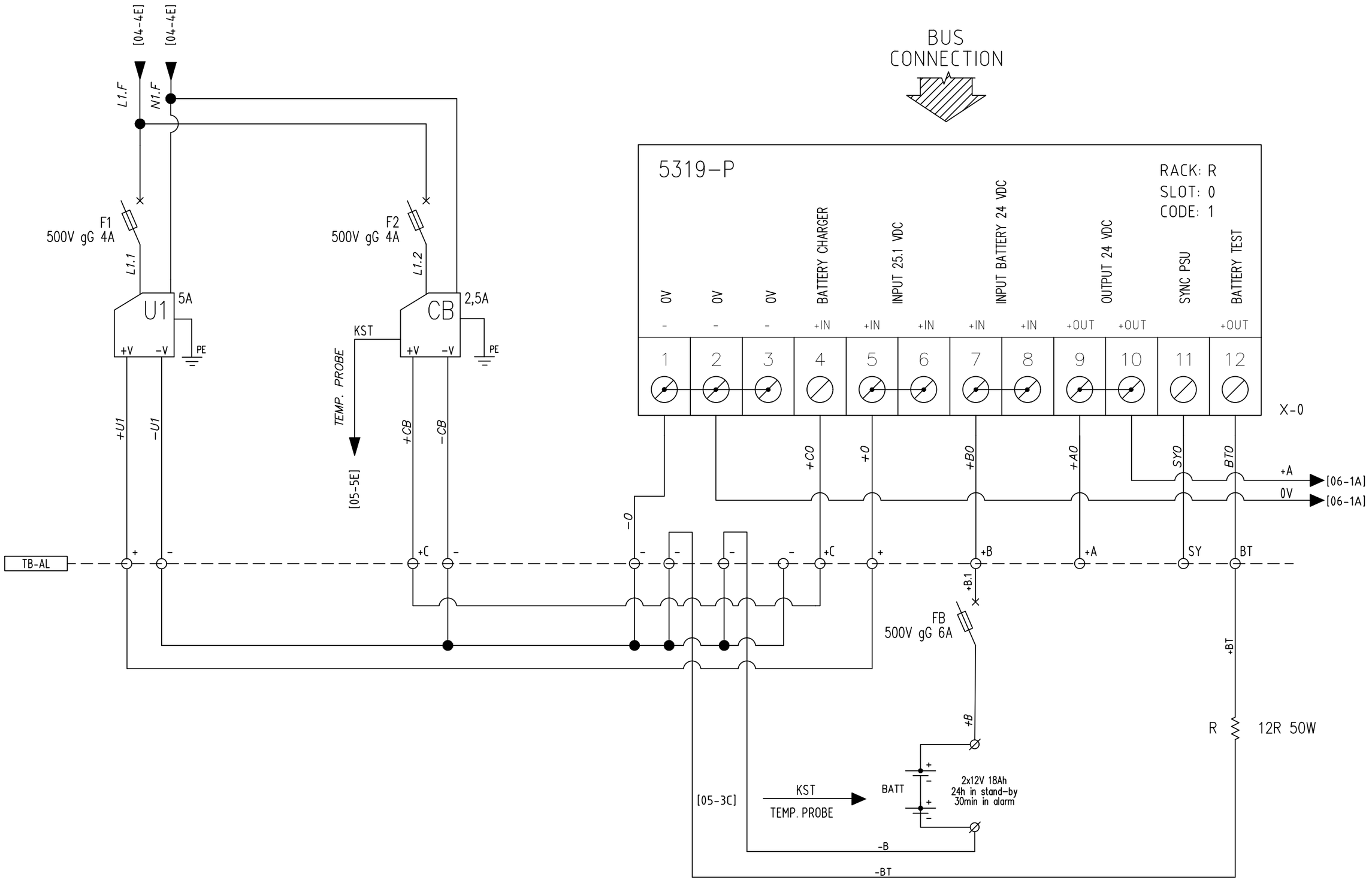
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TITOLO
WIRING & DIMENSIONAL DRAWING POWER SUPPLY DISTRIBUTION
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	4	5



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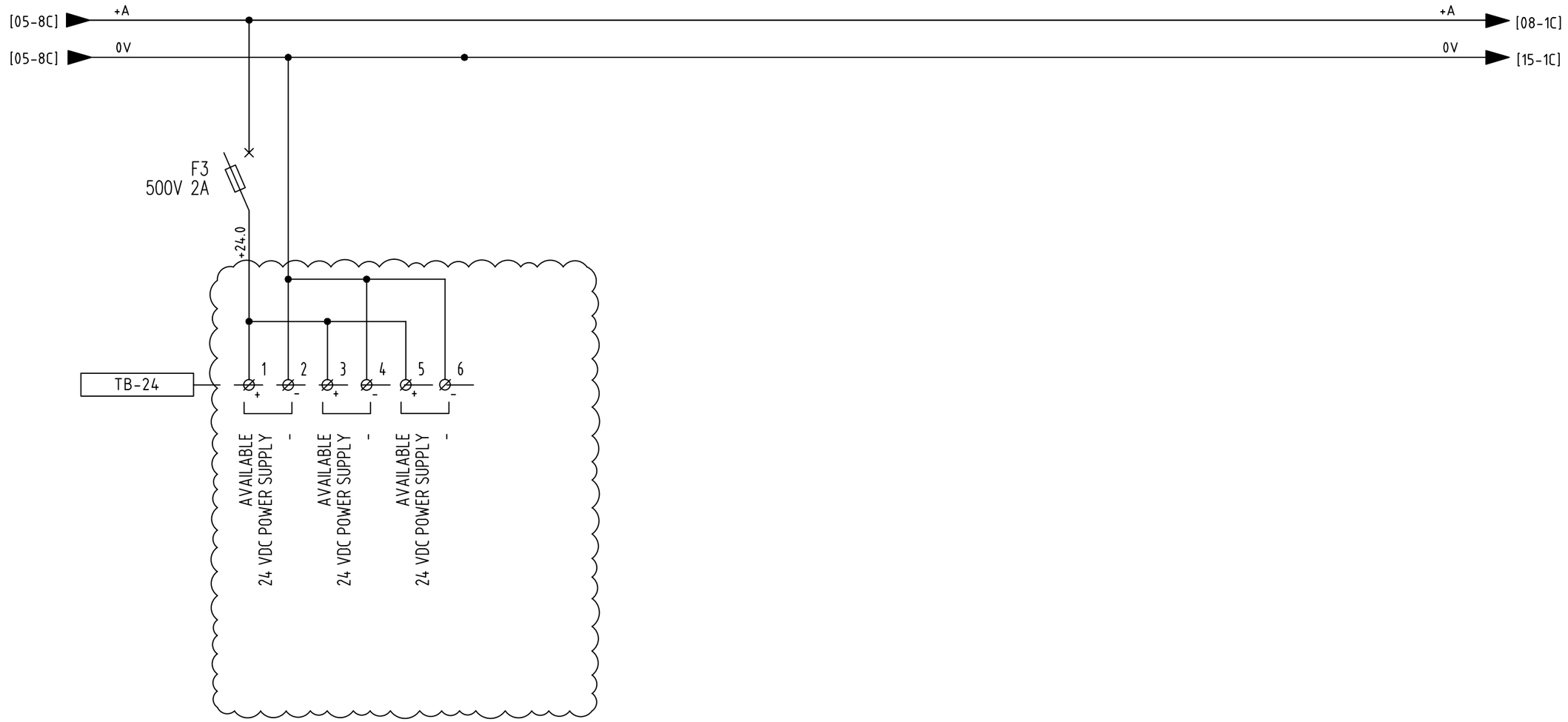
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TITOLO

WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT S-0

TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	5	6



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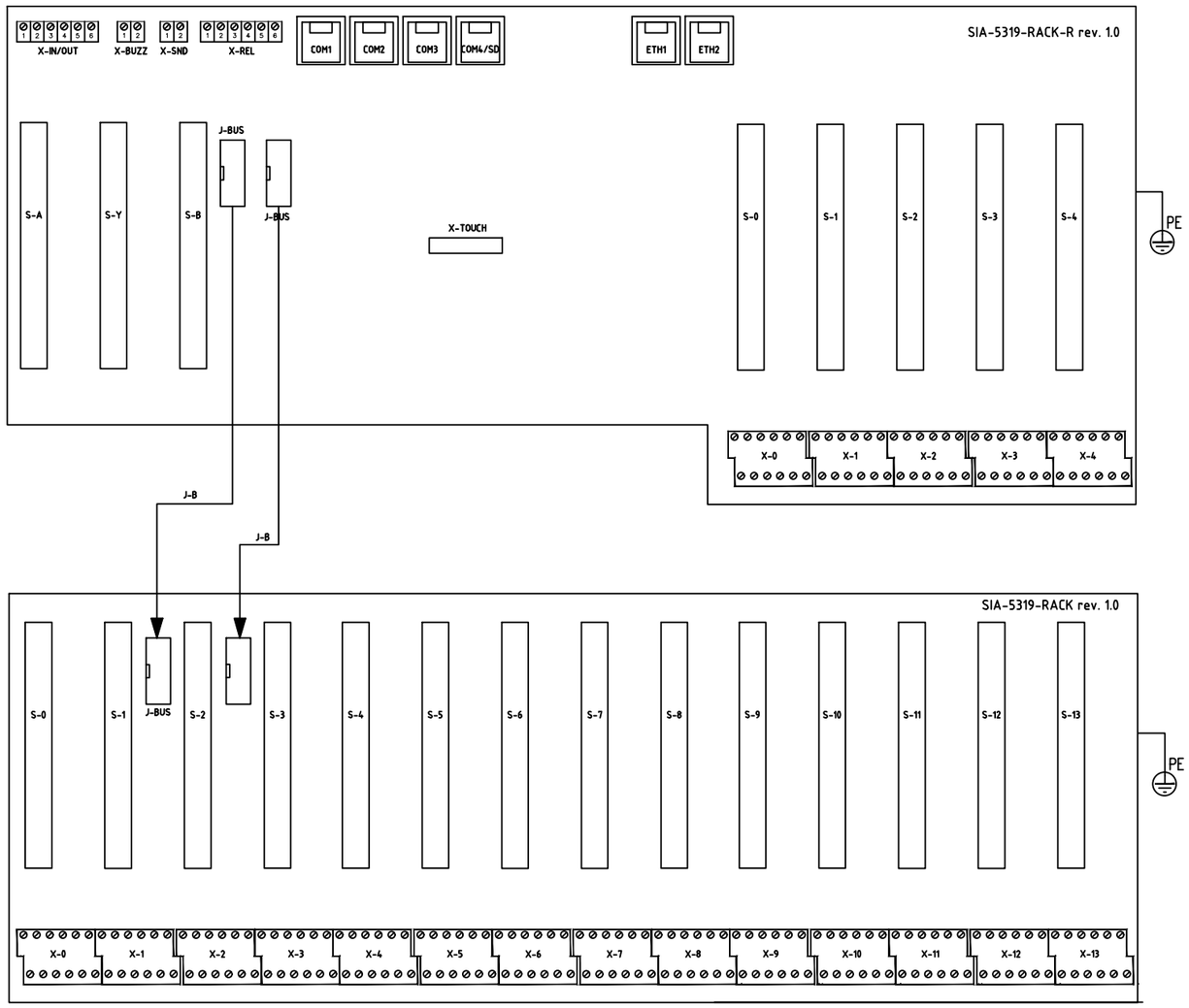
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WIRING & DIMENSIONAL DRAWING
24V POWER SUPPLY DISTRIBUTION

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R0	6	7
DRAWING N°			SHEET	FOLLOW



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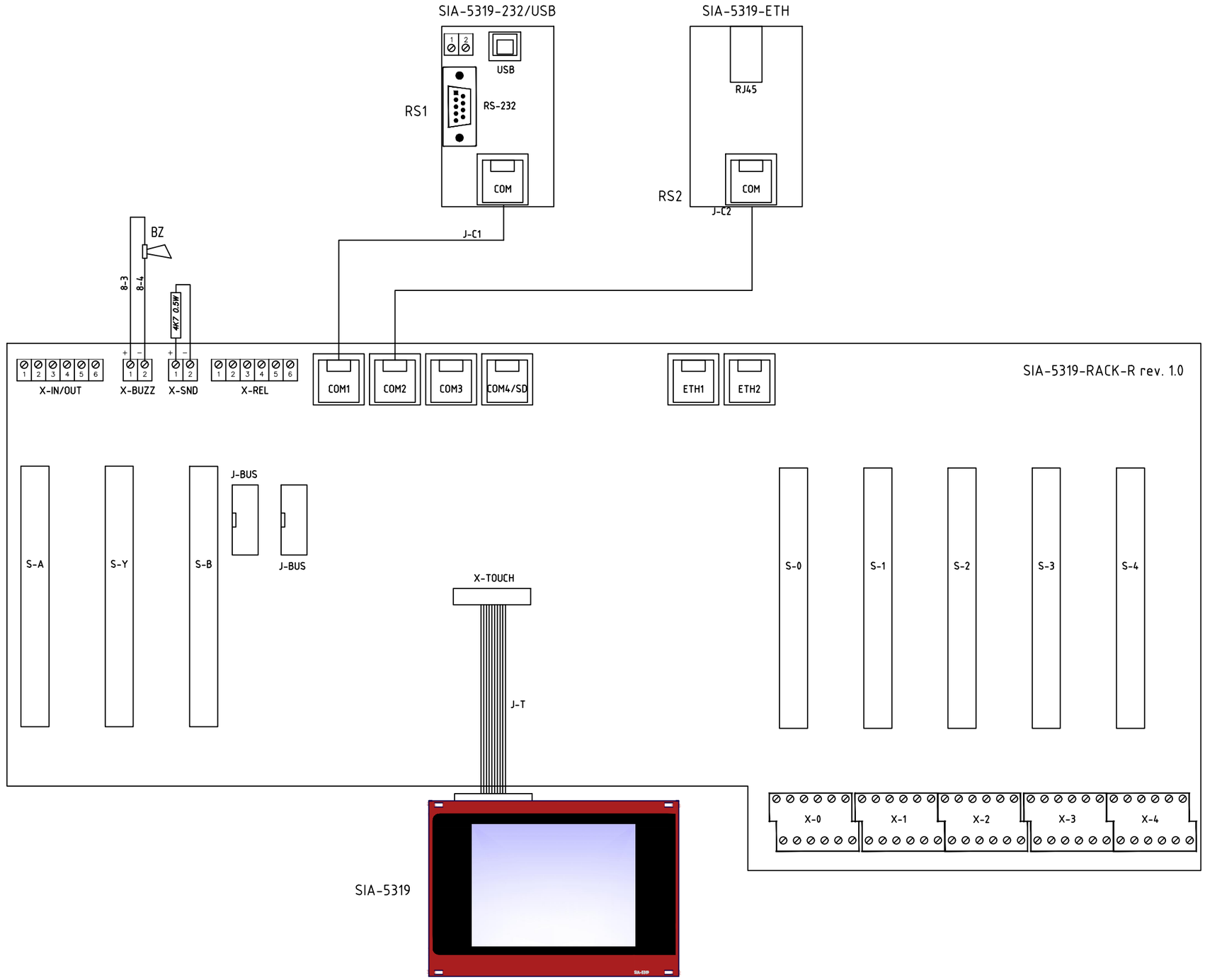
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TITOLO
WIRING & DIMENSIONAL DRAWING RACK CONNECTIONS
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	7	8



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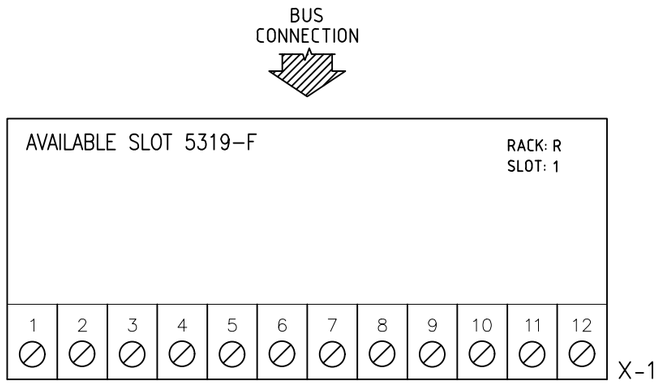
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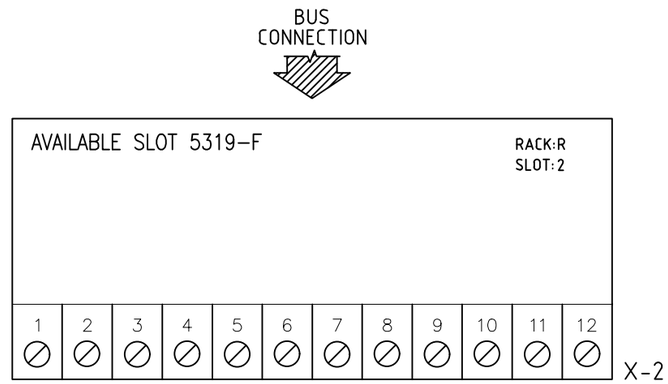
TITOLO

WIRING & DIMENSIONAL DRAWING RACK 5319 SIA-R

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R0	8	9
DRAWING N°			SHEET	FOLLOW





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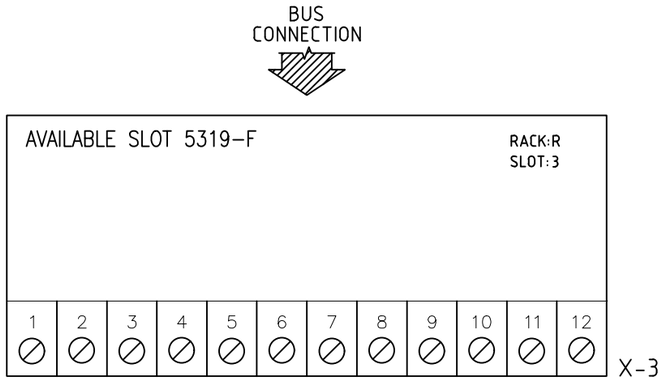
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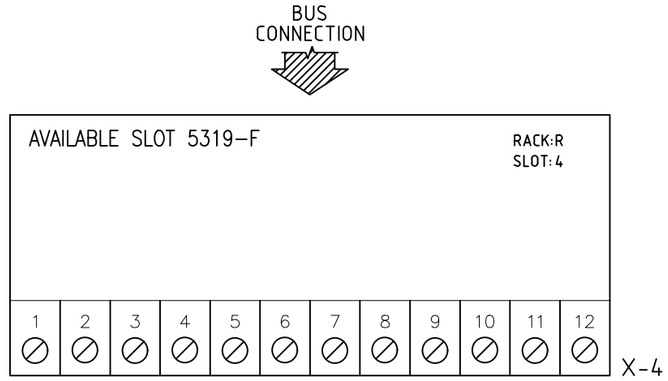
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WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT 1/2
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	9	10





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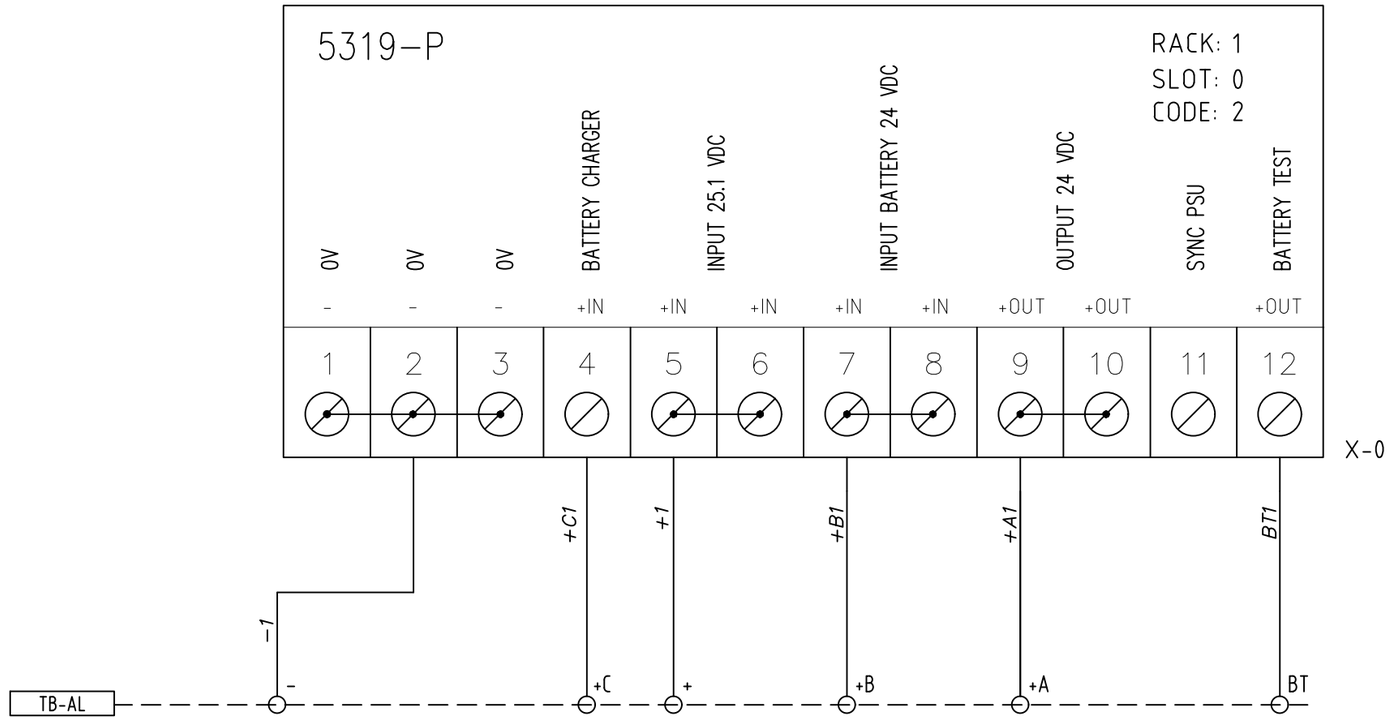
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WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT 3/4
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	10	11

BUS
CONNECTION



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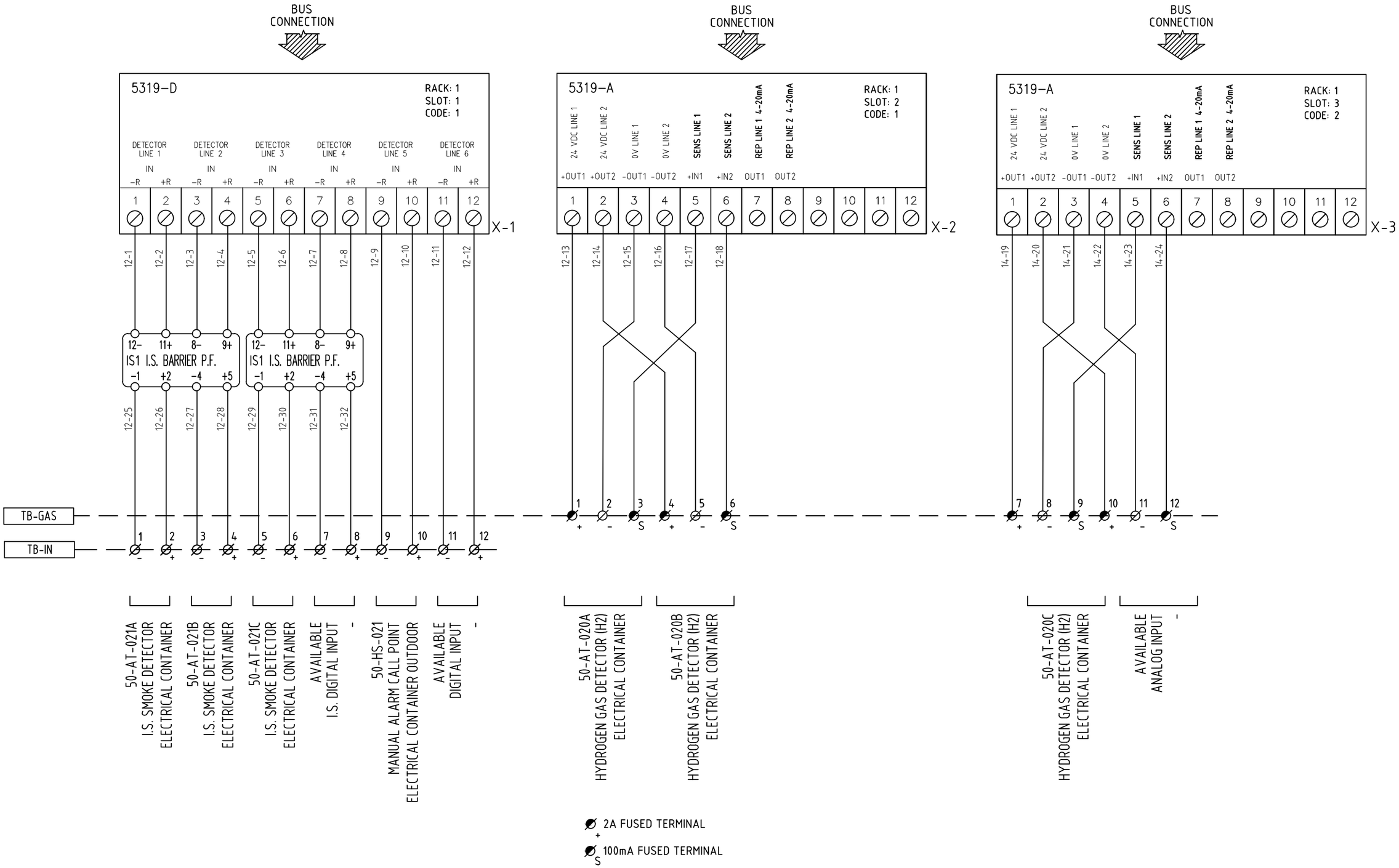
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WIRING & DIMENSIONAL DRAWING
SIA–5319–RACK–1 SLOT 0
TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032–WID–001	A3	R0	11	12
DRAWING N°			SHEET	FOLLOW



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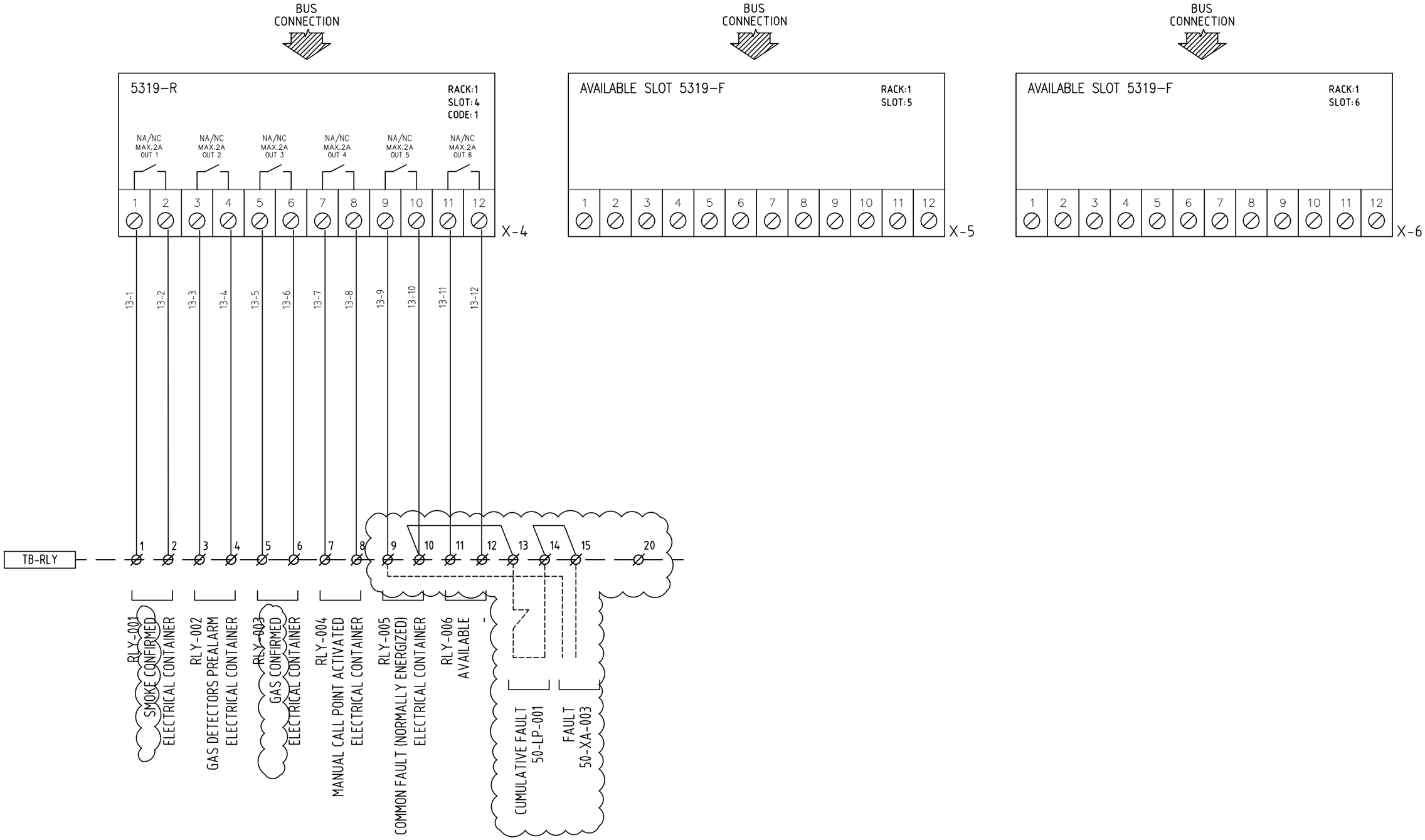
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TITOLO

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SIA–5319–RACK–1 SLOT 1/2/3

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032–WID–001	A3	R0	12	13
DRAWING N°			SHEET	FOLLOW



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TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	13	14

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:7

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-7

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:8

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-8

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:9

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-9

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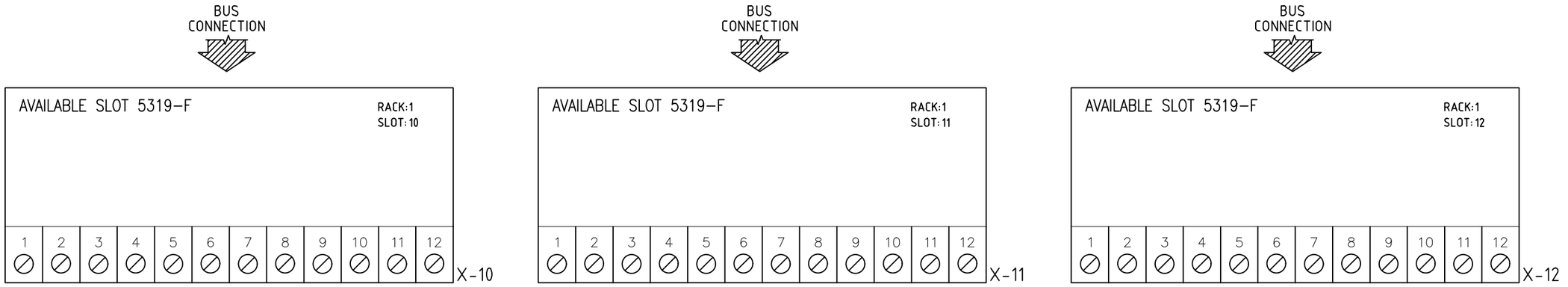
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TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
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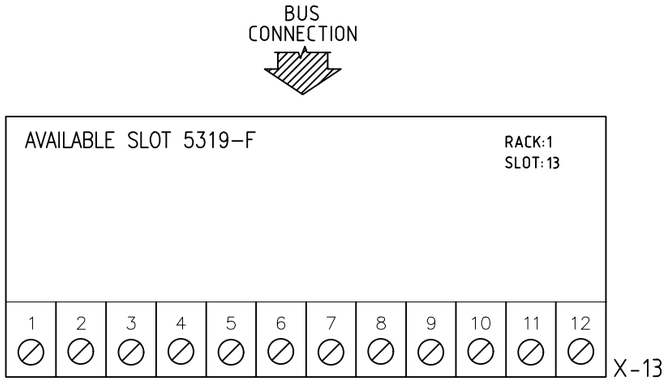
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TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	15	16



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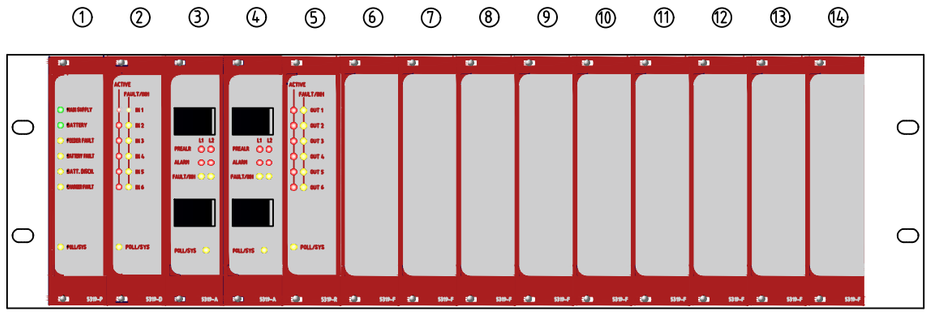
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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-1 SLOT 13
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	16	17





R24 R25 R26 R27 R28

SIA-5319-RACK-R					
POS.	BOARD	DESCRIPTION	POS.	BOARD	DESCRIPTION
1	5319-C	CPU MODULE	8	5319-F	AVAILABLE SLOT
2	5319-Y	SYSTEM MODULE			
3	5319-C	CPU MODULE			
4	5319-P	POWER CONTROL MODULE			
5	5319-E	ADDRESSABLE LOOP MODULE			
6	5319-F	AVAILABLE SLOT			
7	5319-F	AVAILABLE SLOT			

R25 R27 R29 R31 R35

SIA-5319-RACK (1)					
POS.	BOARD	DESCRIPTION	POS.	BOARD	DESCRIPTION
1	5319-P	POWER CONTROL MODULE	8	5319-F	AVAILABLE SLOT
2	5319-D	6 SUPERV. INPUT MODULE	9	5319-F	AVAILABLE SLOT
3	5319-A	4-20mA INPUT MODULE	10	5319-F	AVAILABLE SLOT
4	5319-A	4-20mA INPUT MODULE	11	5319-F	AVAILABLE SLOT
5	5319-R	6 RELAY OUTPUT MODULE	12	5319-F	AVAILABLE SLOT
6	5319-F	AVAILABLE SLOT	13	5319-F	AVAILABLE SLOT
7	5319-F	AVAILABLE SLOT	14	5319-F	AVAILABLE SLOT

SIA® FIRE FIGHTING SYSTEMS

S.I.A. - Safety Industrial Applications s.r.l.

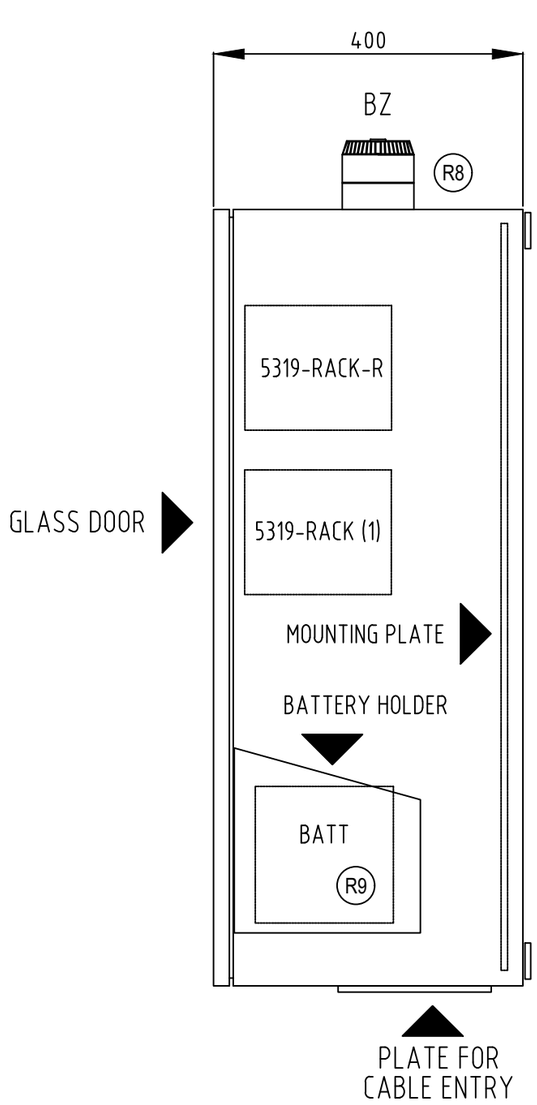
Via Aldo Moro 6 20005 Pogliano Milanese (MI) – ITALY
Tel.: +39 02-35969811 – Fax: +39 02-93541837
Web: www.sia-italia.com E-mail: info@sia-italia.com

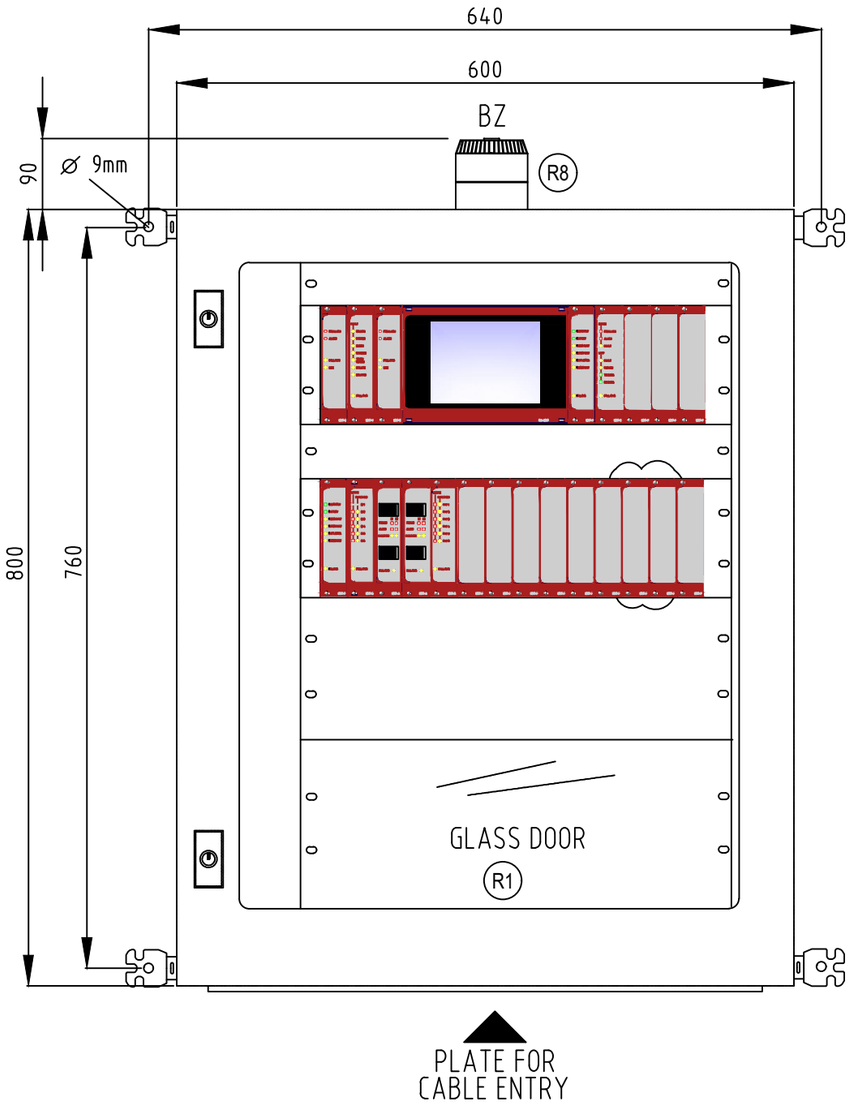
A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

THIS DRAWING IS LEGALLY EXCLUSIVE PROPERTY OF SIA S.r.l. AND CANNOT BE REPRODUCED NEITHER SHOWN TO A THIRD PARTY WITHOUT WRITTEN ASSENT

TITOLO
WIRING & DIMENSIONAL DRAWING RACKS DETAIL
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	17	18





PANEL DETAILS:

- ALL WIRE ARE IN TYPE OF ADEGUATE SECTION
- EACH ELECTRICAL TERMINATION AND EQUIPMENT WITH TAG NUMBER & TERMINAL
- INLET POWER 230 Vac - 50HZ - 0.6 kW MAX
- PROTECTION DEGREE: IP54
- CABINET COLOR: RAL 7035
- DIMENSION 600 w x 400 d x 800 h (mm)

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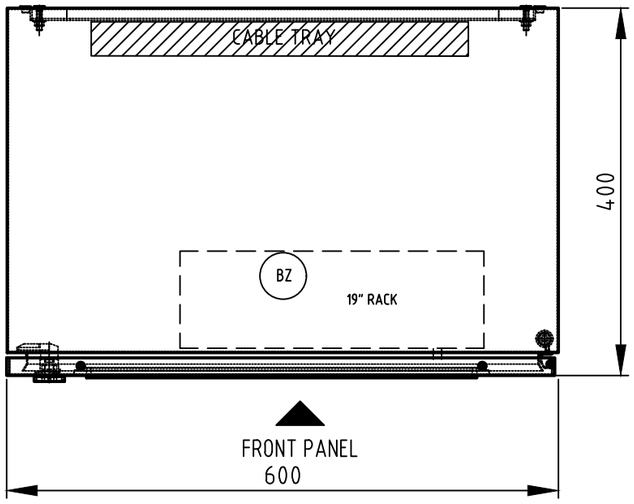
A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

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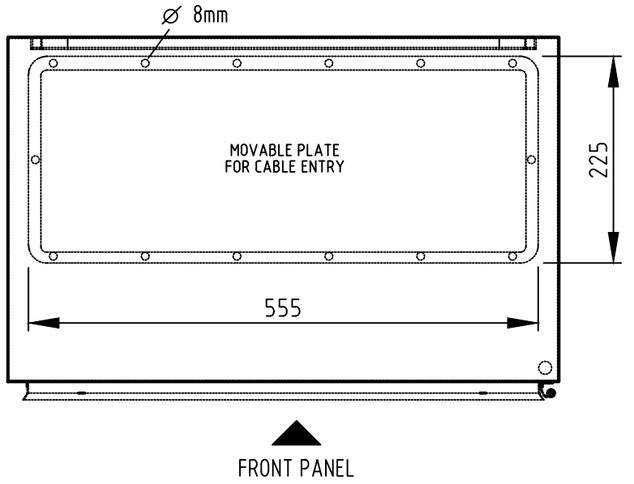
TITOLO
WIRING & DIMENSIONAL DRAWING FRONT & SIDE VIEW
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	18	19

TOP VIEW



BOTTOM VIEW



SIA® FIRE FIGHTING SYSTEMS

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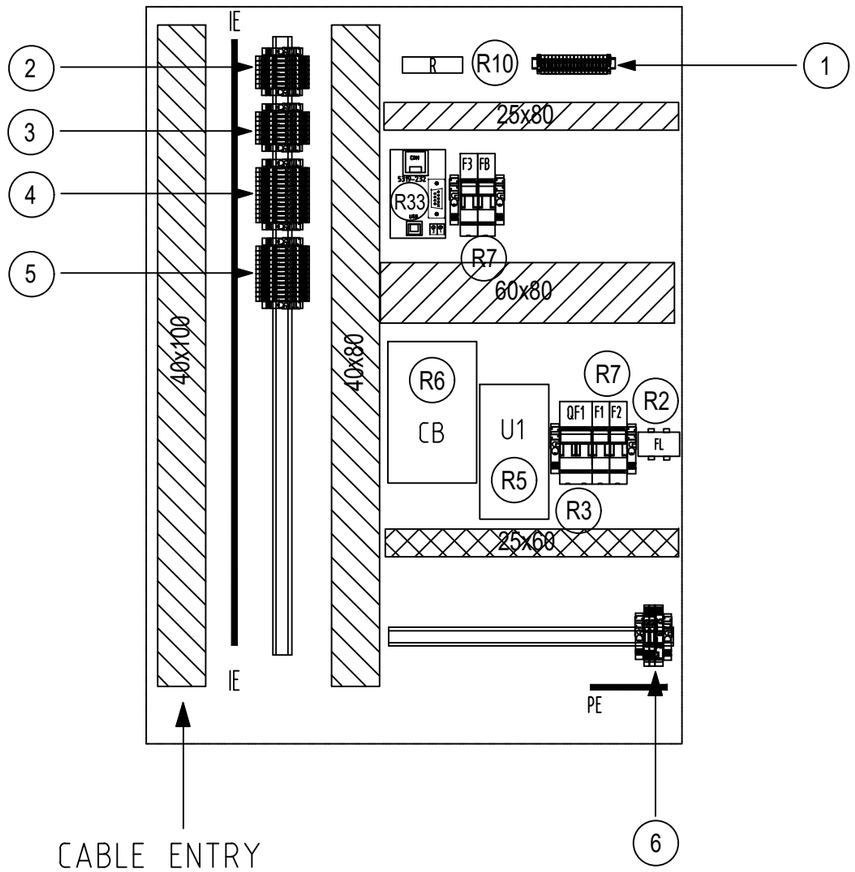
TITOLO

WIRING & DIMENSIONAL DRAWING TOP & BOTTOM VIEW

TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	19	20

INTERNAL MOUNTING PLATE - FRONT VIEW



R11 R12 R13 R14

TERMINAL BOARDS		
POS.	DESCRIPTION	Q.ty
1	TB-AL	19
2	TB-24	6
3	TB-IN	12
4	TB-GAS	12
5	TB-RLY	20
6	TB-PSU	3
7		
8		
9		
10		
11		
12		
13		
14		
15		

24VDC CABLE DUCT

220VAC CABLE DUCT

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TITOLO
WIRING & DIMENSIONAL DRAWING
INTERNAL MOUNTING PLATE VIEW
TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R1	20	21
DRAWING N°			SHEET	FOLLOW

MATERIAL LIST

REF. (Rxx)	Q.ty	DESCRIPTION	MANUFACT.	MODEL	LABEL
R1	1	PANEL 800Hx600Wx400D c/w ACCESSORIES	DKC	R5CEX0864	
R2	1	SUPPRESSOR FILTER	SCHAFFNER	FN2010-6-06	FL
R3	1	CIRCUIT BREAKER 10A	SCHNEIDER ELECTRIC	A9F64210 - Curve C	QF1
R4					
R5	1	POWER SUPPLY 10A	WEIDMULLER	PRO ECO 120W 5A	U1
R6	1	BATTERY CHARGER 2,5A	BENTEL	BAQ60T24	CB
R7	4	FUSE HOLDER WITH FUSE (RATING IN RELEVANT SH.)	SCHNEIDER ELECTRIC	A9N15636	FB, F1, F2, F3
R8	1	HORN	ROSHNI	ROLP-V	BZ
R9	2	BATTERIES	ZENITH (or equivalent)	12V 18Ah	BATT
R10	1	TEST BATTERY RESISTANCE	CGS-TYCO	HSC50 12R	R
R11	19	FEED-THRU TERMINAL	CONTACLIP	RK 1,5-4/15	TB-AL
R12	2+1	FEED-THRU TERMINAL	WEIDMULLER	WDU6+WPE6 - 6 mm2	TB-PSU
R13	42	FEED-THRU TERMINAL	WEIDMULLER	WDU2.5 - 2.5 mm2	TB-24, TB-IN, TB-GAS, TB-RLY
R14	8	FUSED TERMINAL	WEIDMULLER	WSI6 - 6 mm2	TB-GAS
R15					
R16					
R17					
R18					
R19					
R20					
R21					
R22					
R23					
R24	1	OPERATOR PANEL	SIA	SIA-5319-RACK-R	
R25	1	RACK FOR MODULES	SIA	SIA-5319-RACK	
R26	2	CPU CARD	SIA	5319-C	
R27	2	POWER CONTROL CARD	SIA	5319-P	
R28	1	COMMON SIGNALING CARD	SIA	5319-Y	
R29	1	6 DIGITAL SPRV. INPUT CARD	SIA	5319-D	
R30					
R31	1	6 RELAY OUTPUT CARD	SIA	5319-R	
R32					
R33	1	RS-232 SERIAL INTERFACE CARD	SIA	SIA-5319-232/USB	RS1
R34					
R35	2	DUAL CHANNEL 4-20 mA ANALOG INPUT CARD	SIA	5319-A	
R36					

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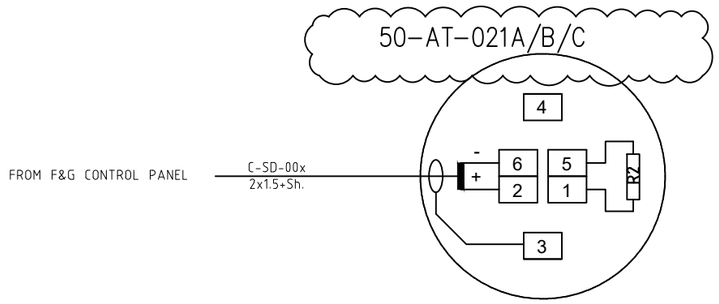
A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

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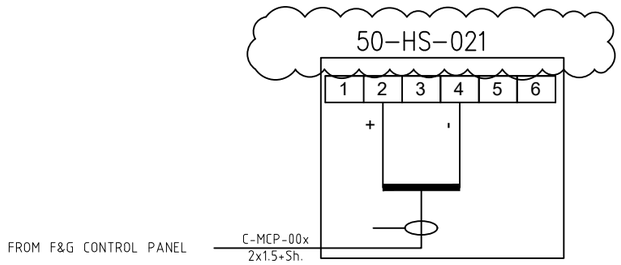
TITOLO
WIRING & DIMENSIONAL DRAWING
MATERIAL LIST
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	21	22

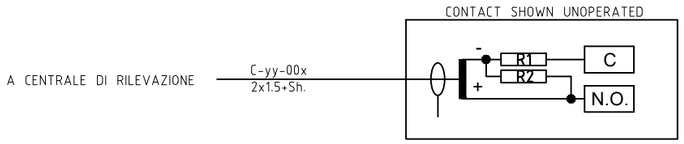
INTRINSICALLY SAFE SMOKE DETECTOR



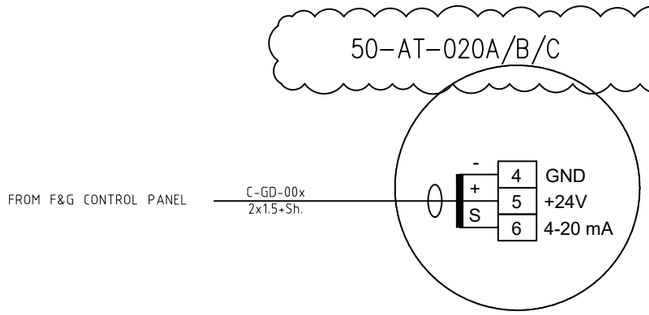
MANUAL ALARM CALL POINT



DIGITAL INPUTS ON 5319-D CARD



HYDROGEN GAS DETECTOR (H2)



RESISTOR LEGEND

R1= 820R - 2 Watt
R2= 4k7R - 1/2 Watt

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TITOLO / TITLE: WIRING & DIMENSIONAL DRAWING
DEVICES TYPICAL CONNECTION

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032–WID–001	A3	R1	22	–

FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

JUNCTION BOX
950-JE-05104

PSC ◀▷ Customer

TB-1

SOUNDER — 950-XZ-05201 (+ / −)

AMBER — 950-XL-05201 (+ / −)

RED — 950-XL-05202 (+ / −)

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

950-JE-05104/B400-FGS-002
12x2,5mmq
(By Others)

TB-950-JE-051004

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

F&G PANEL
50-LP-002

PSC ◀▷ Customer

TB-XXX

GAS CONFIRMED
50-XA-001

SMOKE CONFIRMED
50-XA-002

50-LP-002/B400-FGS-002
2x2x0,75mmq
(By Others)

TB-XXX

PSC ◀▷ Customer

MANUAL
FIRE ALARM

950-MFA-05201 (+ / −) WH / BK

950-MFA-05201/B400-FGS-002
2x0,75mmq
(By Others)

TB-XXX

WH / BK

Shield Bar

I.E.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
FIRE & GAS ALARM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 003

REV. 01

File Name : 1724000448-EL-DG-00015 Rev. 01

F.to UNI A3: 420mmx297mm

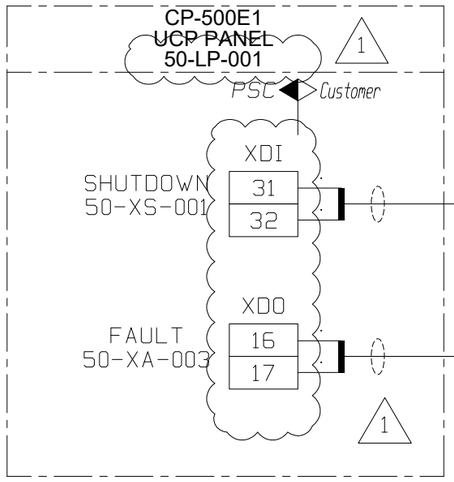
FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

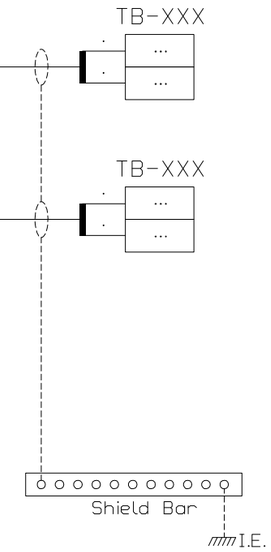
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-SIS-001



50-XS-001/B400-SIS-001
2x2,5mmq
(By Others)

50-XA-003/B400-SIS-001
1x2x0,75mmq
(By Others)



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
SHUTDOWN/FAULT ALARM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 004

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 01

FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

MCC PANEL
CP-500E1

400/230Vac
POWER SUPPLY

XINC
1
2
3
4
PE

50001-CEL-L1
1x70mmq

50001-CEL-L2
1x70mmq

50001-CEL-L3
1x70mmq

50001-CEL-N
1x70mmq

50001-CEL-PE
1x70mmq

1

JUNCTION BOX
JB-500E8

PSC ◆ Customer

TB-1
L1
L2
L3
N
PE

83016-CEL
5G70mmq
(By Others)

B-200 CONTAINER LV ROOM

SG-200N1
CLA3/+08 COLUMN CUBICLE

1

TB-XXX

230Vac
UPS
POWER SUPPLY

XINC
5
6
PE

1

50002-CEL-LN
3G2,5mmq
(By Others)

JUNCTION BOX
JB-500F8

PSC ◆ Customer

TB-1
L
N
PE

84313-CEL
3G2,5mmq
(By Others)

B-300 CONTAINER UPS ROOM

DP-200F3
AC DISTRIBUTION BOARD-PAS Q14

1

TB-XXX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
400/230V POWER SUPPLY

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 005

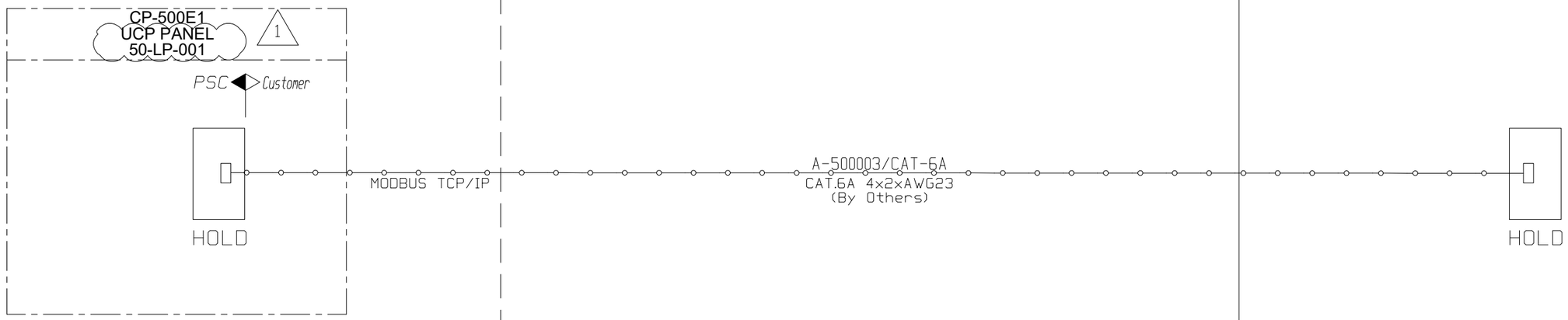
REV. 01

File Name : 1724000448-EL-DG-00015 Rev. 01

F.to UNI A3: 420mmx297mm

FIELD - PACKAGE A-50003 | I&T EQUIPMENT ROOM (ITER)

INSIDE CONTAINER | OUTSIDE CONTAINER | ICSS SYSTEM



PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
CONTROL SYSTEM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 006

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 01

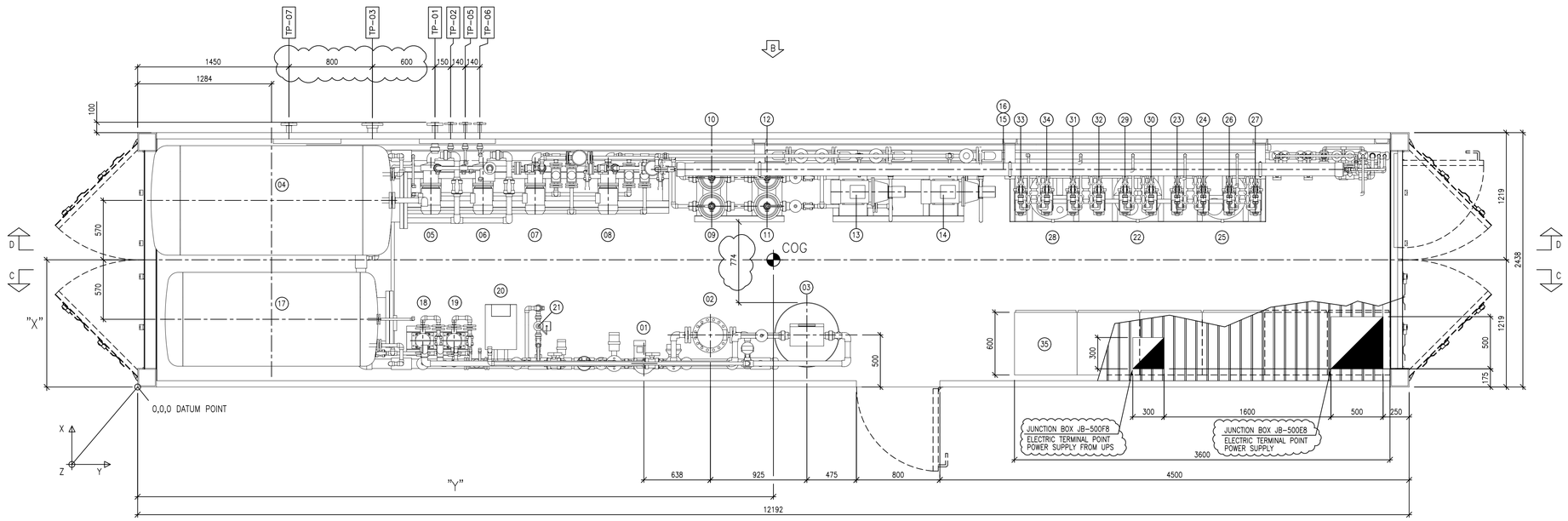
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	ELECTRICAL CABLE LIST	Date: 01/08/2024 Rev. 01

CABLE N°	CABLE				CABLE EXTREMITIES				LENGHT (m)	SUPPLIED BY	REMARKS	REV.
	CABLE SIZE (mm)	TYPE	OUTER SHEATH	SERVICE	FROM	CABLE ENTRY	TO	CABLE ENTRY				
50001-CEL-L1	1x70	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Electrical Power Section)	JB-500E8	TBD	CP-500E1	-	10	PSC		1
50001-CEL-L2	1x70	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Electrical Power Section)	JB-500E8	TBD	CP-500E1	-	10	PSC		1
50001-CEL-L3	1x70	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Electrical Power Section)	JB-500E8	TBD	CP-500E1	-	10	PSC		1
50001-CEL-N	1x70	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Electrical Power Section)	JB-500E8	TBD	CP-500E1	-	10	PSC		1
50001-CEL-PE	1x70	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Electrical Power Section)	JB-500E8	TBD	CP-500E1	-	10	PSC		1
50002-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Local Control Panel (Instruments Power Distribution Section)	JB-500F8	TBD	CP-500E1	-	10	PSC	Fire resistant	1
50003-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	SW Booster Pumps	CP-500E1	-	P-50003A	TBD	18	PSC		1
50004-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	SW Booster Pumps	CP-500E1	-	P-50003B	TBD	18	PSC		1
50005-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Backwash Pumps	CP-500E1	-	P-50002A	TBD	19	PSC		1
50006-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Backwash Pumps	CP-500E1	-	P-50002B	TBD	19	PSC		1
50007-CEL	4G2,5 Sh	XLPE/LSZH-0,6/1kV	Black	HP SWRO Pumps	CP-500E1	-	P-50004A	TBD	16	PSC		1
50008-CEL	4G2,5 Sh	XLPE/LSZH-0,6/1kV	Black	HP SWRO Pumps	CP-500E1	-	P-50004B	TBD	16	PSC		1
50009-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Fresh Water Pumps	CP-500E1	-	P-50009A	TBD	18	PSC		1
50010-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Fresh Water Pumps	CP-500E1	-	P-50009B	TBD	18	PSC		1
50011-CEL	4G16	XLPE/LSZH-0,6/1kV	Black	Electric Heater	CP-500E1	-	H-50001	TBD	13	PSC		1
50012-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Container Heater	CP-500E1	-	HHS-50003A	TBD	15	PSC		1
50013-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Container Heater	CP-500E1	-	HHS-50003B	TBD	15	PSC		1
50014-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Container Fan	CP-500E1	-	HFA-5001A	TBD	15	PSC		1
50015-CEL	4G2,5	XLPE/LSZH-0,6/1kV	Black	Container Fan	CP-500E1	-	HFA-5001B	TBD	15	PSC		1
50016-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Lighting circuit	CP-500E1	-	NL-001	TBD	20	PSC		1
50017-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	UV Sterilizer S-50010	CP-500E1	-	LP-S-50010	TBD	15	PSC		1
50018-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Local Panel Coarse Filter A-50003	CP-500E1	-	LP-A-50003	TBD	15	PSC		1
50019-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Local Panel Sand filter S-50001	CP-500E1	-	LP-S-50001	TBD	11	PSC		1
50020-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Fire & Gas Panel	CP-500E1	-	500-LP-002	TBD	10	PSC	Fire resistant	1
50021-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Softening Filter	CP-500E1	-	LP-S-50004	TBD	16	PSC		1
50022-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Soda Dosing Pumps	CP-500E1	-	P-50005A	TBD	13	PSC		1
50023-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Soda Dosing Pumps	CP-500E1	-	P-50005B	TBD	13	PSC		1
50024-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Antiscalant Dosing Pumps	CP-500E1	-	P-50006A	TBD	13	PSC		1
50025-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Antiscalant Dosing Pumps	CP-500E1	-	P-50006B	TBD	13	PSC		1
50026-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Container Inlet	CP-500E1	-	P-50007A	TBD	13	PSC		1
50027-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Container Inlet	CP-500E1	-	P-50007B	TBD	13	PSC		1
50028-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Seawater Intake	CP-500E1	-	P-50008A	TBD	13	PSC		1
50029-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Seawater Intake	CP-500E1	-	P-50008B	TBD	13	PSC		1
50030-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Wastewater Tank	CP-500E1	-	P-50010A	TBD	13	PSC		1
50031-CEL-LN	3G2,5	XLPE/LSZH-0,6/1kV	Black	Biocide Dosing Pumps to Wastewater Tank	CP-500E1	-	P-50010B	TBD	13	PSC		1

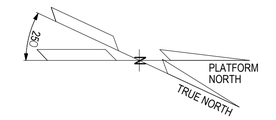
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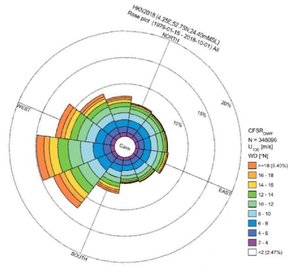
DRAWING NO. 1724000448-MAC-DA-00005

REV. 2



PLAN





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg

DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

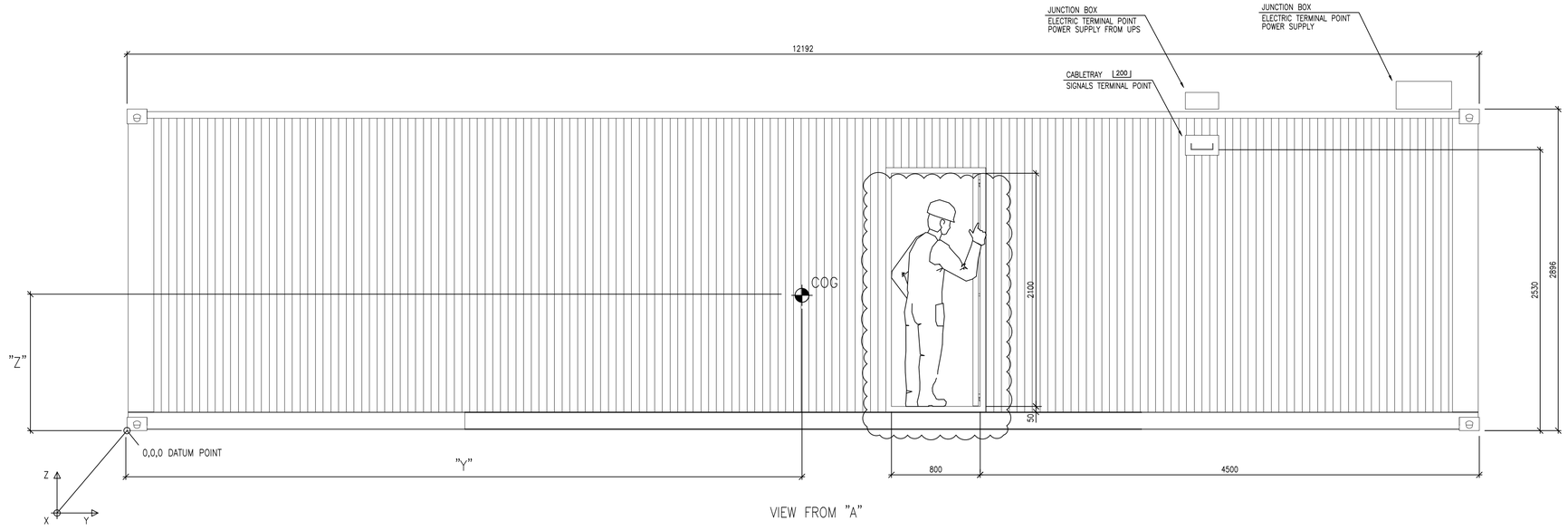
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND FOUNDATIONS LAODING CALCULATIONS-PLANS

CONTRACT NO./TITLE			SCALE 1:25
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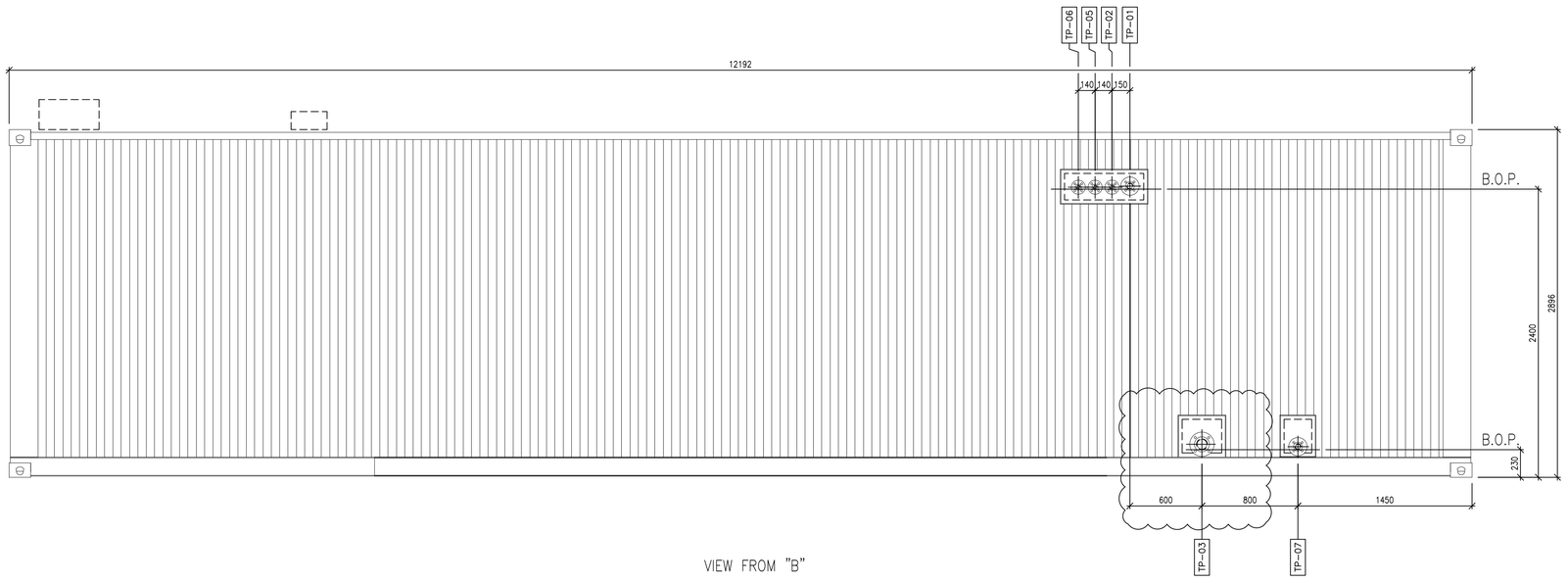
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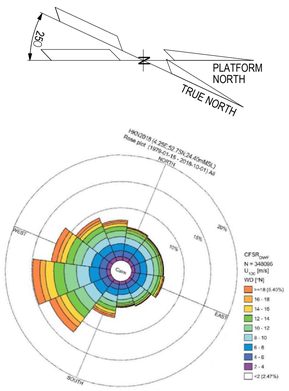
REV. 2



VIEW FROM "A"



VIEW FROM "B"



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC

DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

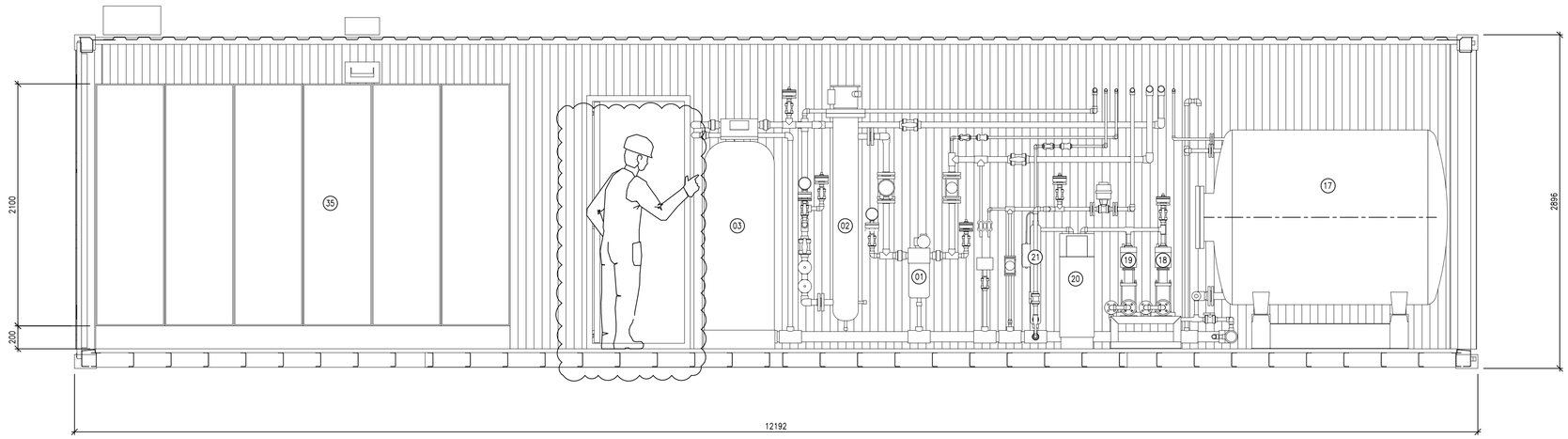
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND FOUNDATIONS LAODING CALCULATIONS-VIEWS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 002	REV. 2

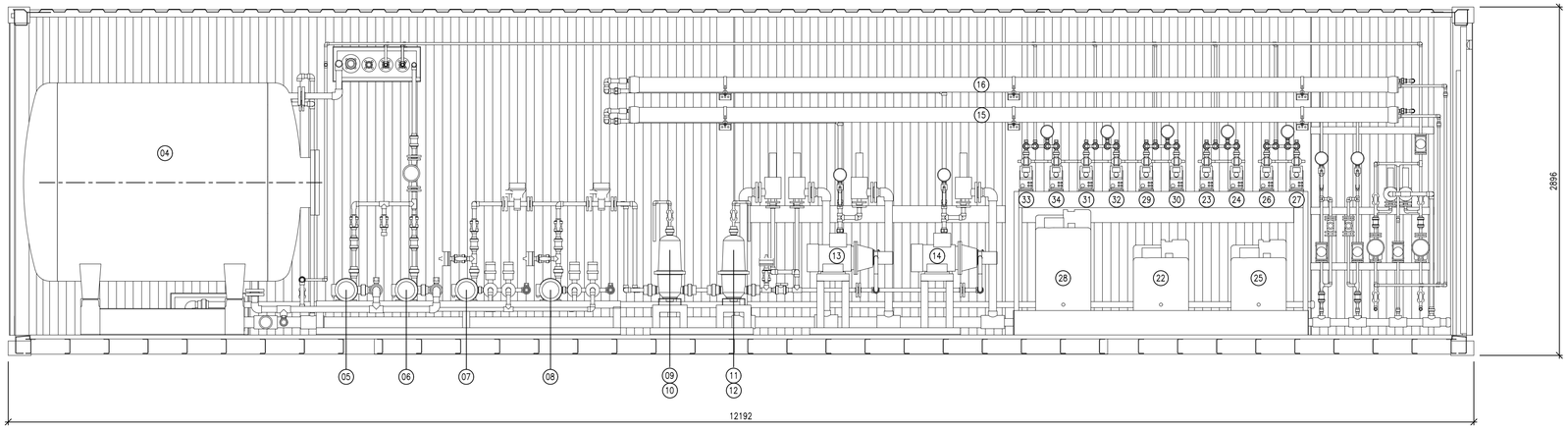
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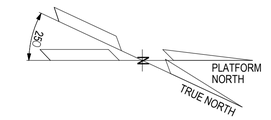
REV. 2

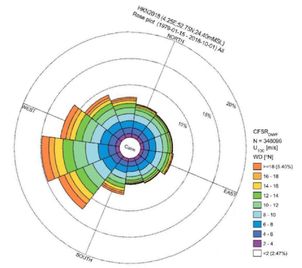


SECTION "C-C"



SECTION "D-D"





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-SECTIONS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 003	REV. 2

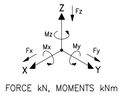
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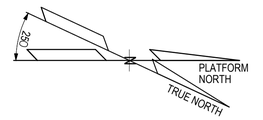
REV. 2

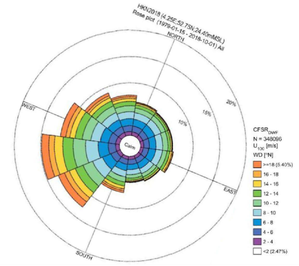


MAX. LOAD REACTION						
OPERATING CONDITION						
POINT	Fx	Fy	Fz	Mx	My	Mz
A1	19.5	9.1	49.0	118.4	27.3	118.4
A2	19.5	9.1	49.0	118.4	27.3	118.4
B1	19.5	9.1	49.0	118.4	27.3	118.4
B2	19.5	9.1	49.0	118.4	27.3	118.4
TRANSIT CONDITION						
A1	19.3	19.3	48.3	–	–	–
A2	19.3	19.3	48.3	–	–	–
B1	19.3	19.3	48.3	–	–	–
B2	19.3	19.3	48.3	–	–	–



FORCE kN, MOMENTS kNm





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC

DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-FOUNDATION

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24

A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 004	REV. 2

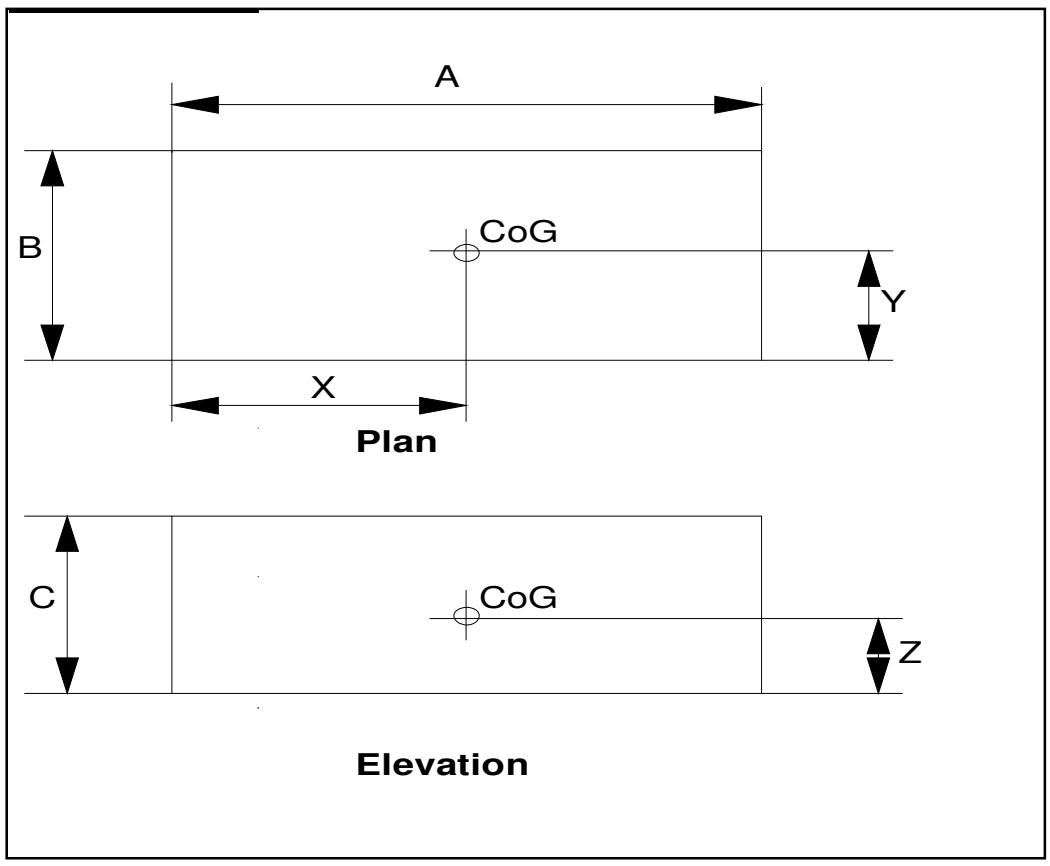
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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	PACKAGE WEIGHT DATA SHEET	Sh. 4 of 4 Date 27/06/2024 Rev. 0

WEIGHT DATA (kg)

		Areas for input by Supplier	
Dry Weight	(I)	10500	**kg**
Content	(II)	Note (1)	**kg**
Operating Weight	(I+II)	15675	**kg**
Auxiliaries' weight, included in I (specify under Notes)		-	**kg**
Test weight, i.e. filled with water		15675	**kg**
Transport weight		10500	**kg**

CENTRE OF GRAVITY (CoG) DATA FOR INSTALLED DRY CONDITION



Overall dimensions		
A =	12192	**mm**
B =	2438	**mm**
C =	2896	**mm**

CoG location (mm)		
X =	7076	**mm**
Y =	1034	**mm**
Z =	1293	**mm**

NOTES

(1) Not applicable as the dry weight include the container and equipment

(2) CoG indication in lifting operation

WEIGHT AND CoG STATUS (TICK OFF AS APPROPRIATE)

■ Estimated	☐ Calculated
■ Catalogue data	☐ Weighed

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC & discipline : I

Instrumental	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-LP-002/B400-FGS-003	CONFIRMED GAS ALARM / MARSHALLING PCS	ONSHORE	C10001467	CJX10	100	2024-11-26	RFC 1
A-50000	Water Treatment Package	ONSHORE	C10002350	CZX01I	100	2024-11-26	RFC 2
C-50-XA-003/B400-SIS-001	50-LP-001/B400-SIS-001	ONSHORE	C10004541	CJX10	100	2024-11-26	RFC 1
C-50-XS-001/B400-SIS-001	TRIP SIGNAL TO UCP / MARSHALLING PCS	ONSHORE	C10001450	CJX10	100	2024-11-26	RFC 1

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-50-XS-001/B400-SIS-001	: TRIP SIGNAL TO UCP / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	50-10	: Water Desalination Package & Distribution	Module	LD/LD_B-400		
TASK	code	C10001450	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10

Multi/Single-Core Instrument Control Cable

CABLE DATA

Type	Cu-MICA-XLPE-OS-LSZH-SWB-LSZH	Cores/Size mm²	2X2,5 mm2	Color	ORANGE
From	50-LP-001	To	B400-SIS-001		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	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	0,6	Ω
	SCREEN	0,6	Ω
	EARTH	NA	Ω
	ARMr	0,6	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

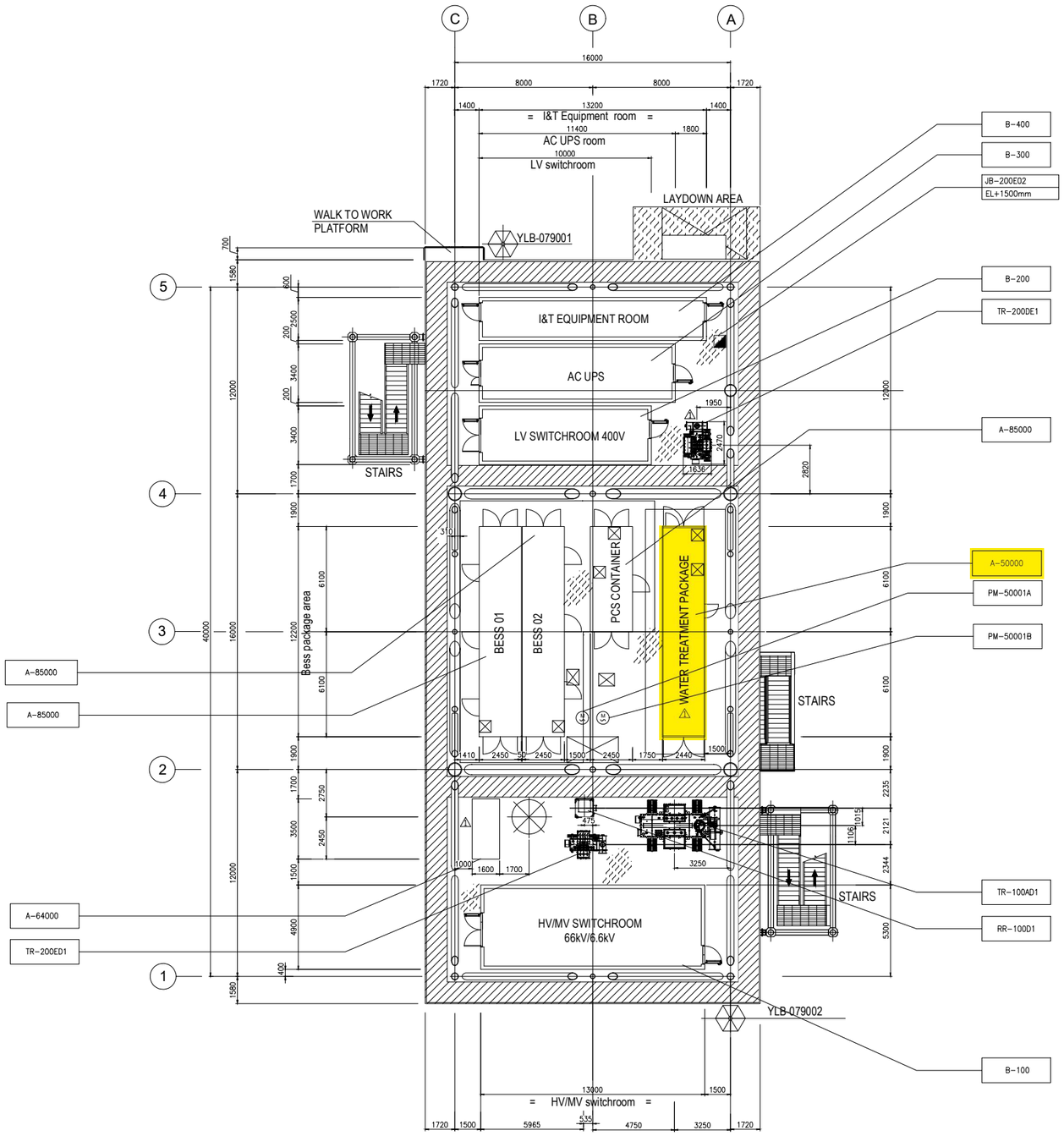
Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

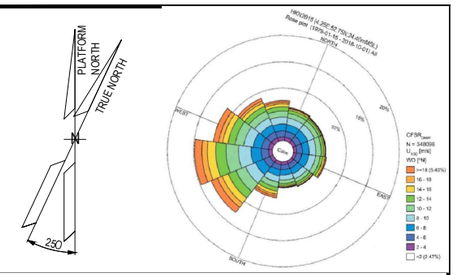
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: N°7722/24 10/07/2024

Comments Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-11-25	2024-11-26	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T16:33:15.377Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T15:48:43.044Z	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

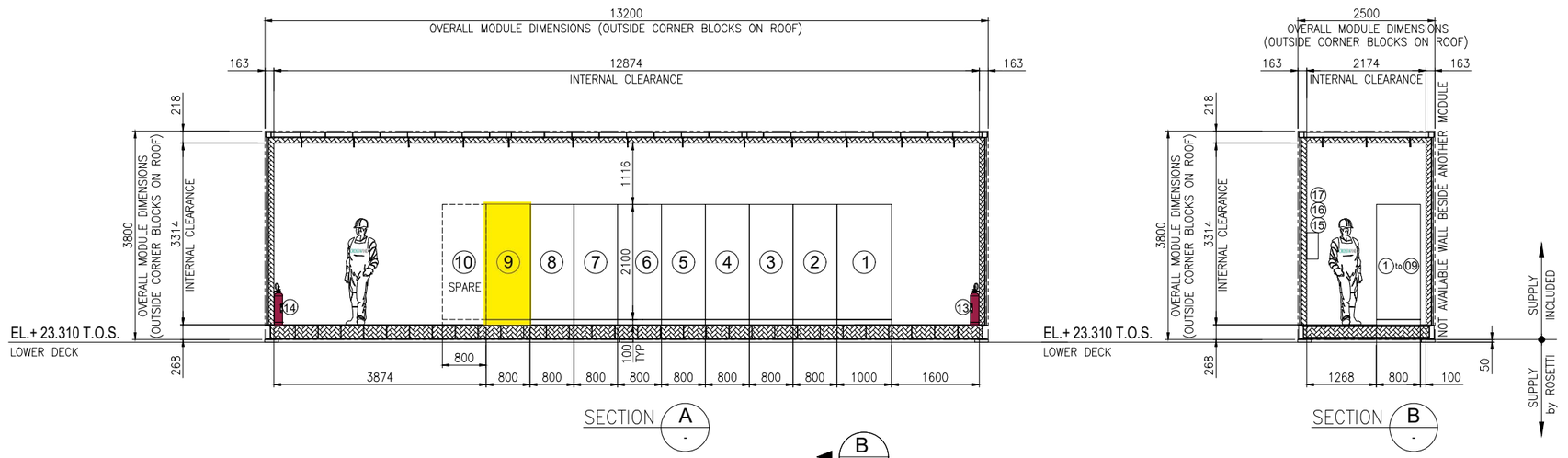
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SAM | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 04/03/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20101 | SHEET 001 | REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20101 REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

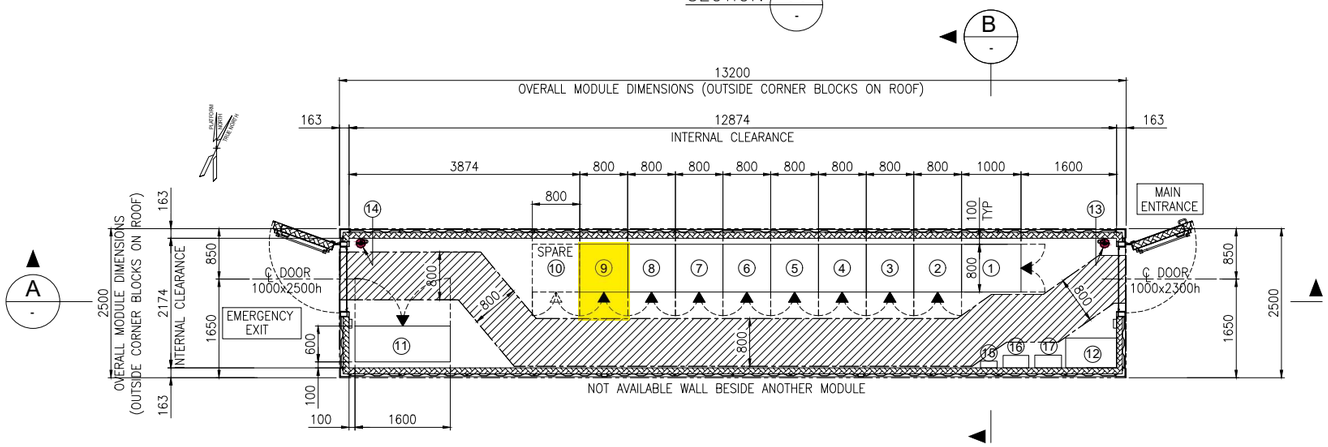
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

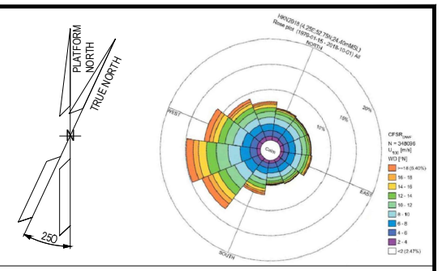
SECTION B -



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

EQUIPMENT LIST

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



NOTES

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

LEGEND

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

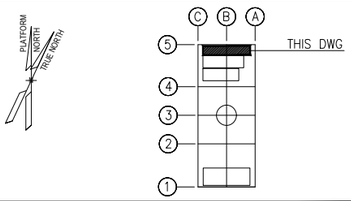
HOLDS

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REFERENCE

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

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

FIELD		I&T EQUIPMENT ROOM (ITER)
PACKAGE	CABLE NO	MARSHALLING CABINET B400-SIS-001

<01>

A-85000 BESS UCP — 85-XS-001 — (NOTE 5) — (NOTE 5) — (NOTE 5) — 1BK 2BK — NOTE-2

C-85-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 45 — 2BK — 46 — 85-XS-001

Shield Bar

A-20000 ELECTROLYSER UCP — 20-XS-001 — (NOTE 5) — (NOTE 5) — (NOTE 5) — 1BK 2BK — NOTE-2

C-20-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 07 — 2BK — 08 — 20-XS-001

Shield Bar

A-80000 FUEL CELL UCP — 80-XS-001 — (NOTE 5) — (NOTE 5) — (NOTE 5) — 1BK 2BK — NOTE-2

C-80-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 29 — 2BK — 30 — 80-XS-001

Shield Bar

CP-500E1
UCP PANEL
50-LP-001

A-50003 Water Treatment Unit UCP — 50-XS-001 — TB-EXT — 1 — 2 — 1BK 2BK — NOTE-2

C-50-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 15 — 2BK — 16 — 50-XS-001

Shield Bar

A-63000 I. AIR PACKAGE UCP — 63-XS-001 — TB-XA — 1 — 2 — 1BK 2BK — NOTE-2

C-63-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 17 — 2BK — 18 — 63-XS-001

Shield Bar

A-64000 NITROGEN PACKAGE UCP — 64-XS-001 — TB-XA — 1 — 2 — 1BK 2BK — NOTE-2

C-64-XS-001/B400-SIS-001
2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-XS-000 — 1BK — 19 — 2BK — 20 — 64-XS-001

I.E.

Shield Bar

<01>

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – SAFETY SYSTEM WIRING DIAGRAMS
PACKAGE UCP SHUTDOWN

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

	DRAWING NO.	SHEET	REV.
A3	123-A90-DDL-IN-DG-40016	020	01

File Name : 123A90-DDL-IN-DG-40015_00.DWG

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

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. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

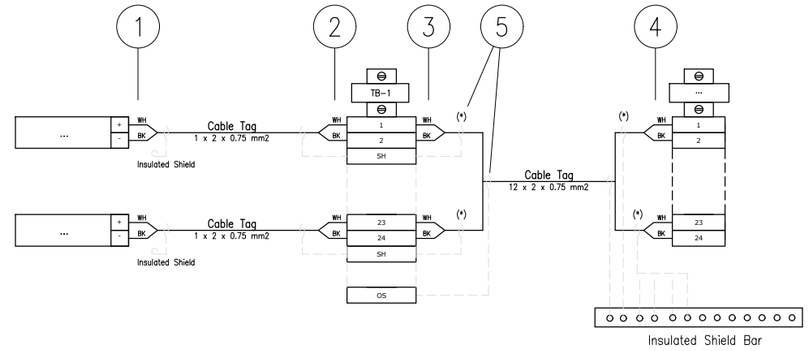
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

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

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

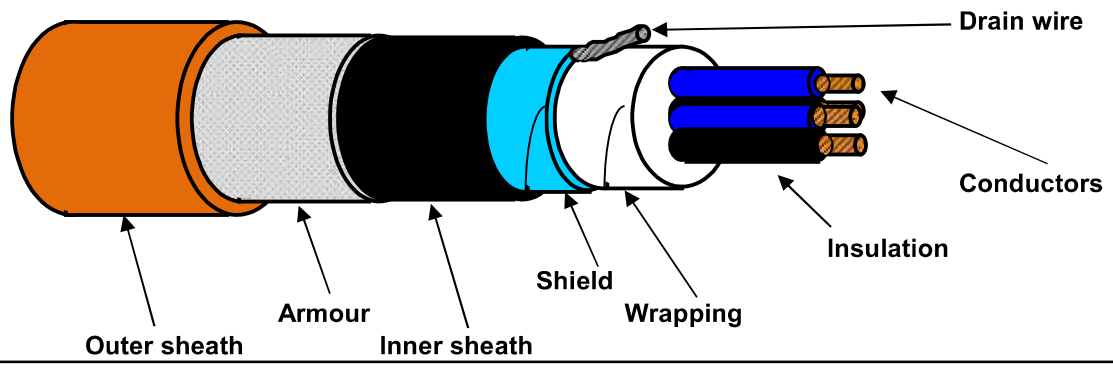
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-50-XS-001/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						50-LP-001	Communication	Lower Deck	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_Double			n.a.				L-SEC-21 / L-SEC-18C / L-SEC-18B / L-SEC-18A / B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2G / B-400-SEC-2H / I-MCT-403

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

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,6 mm	
Cores colour code :	**Black NUMBERED (from 1 to 2)**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	8/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 1,0 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 7,86 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

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

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

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ROSETTI MARINO | CROSSWIND

ITEM	Tag	50-LP-002/B400-FGS-003	: CONFIRMED GAS ALARM / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	50-10	: Water Desalination Package & Distribution	Module	LD/LD_B-400		
TASK	code	C10001467	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10

Multi/Single-Core Instrument Control Cable

CABLE DATA

Type: Cu-MICA-XLPE-IS-OS-LSZH-SWB-LSZH | Cores/Size mm²: 2X2X0,75 mm2 | Color: ORANGE

From: 50-LP-002 | To: B400-FGS-003

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

TEST ALL CORES AND RECORD LOWEST VALUE

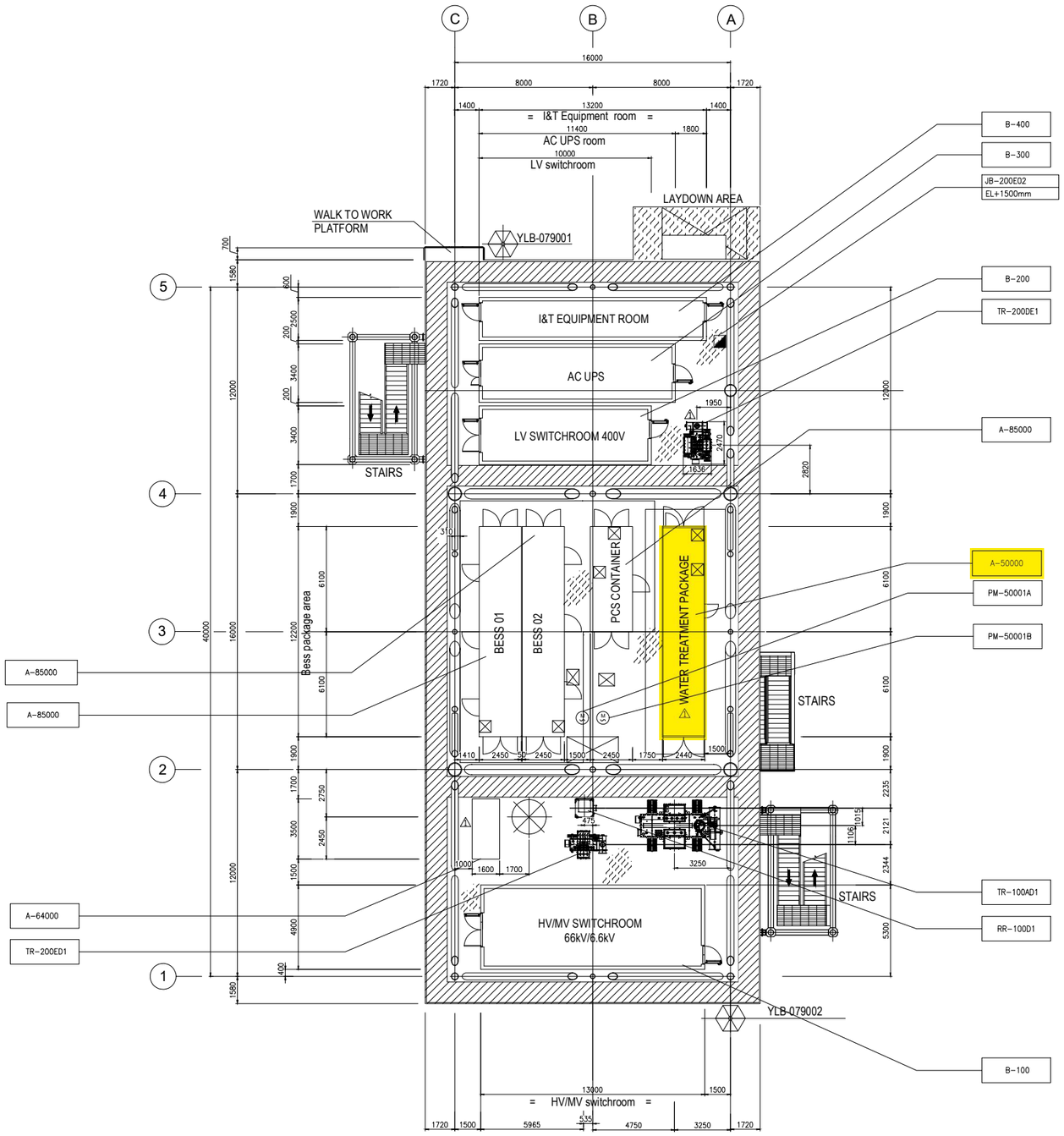
Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

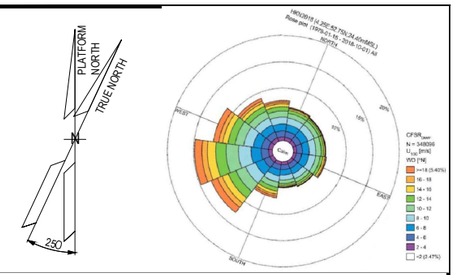
TYPE / SERIAL N°: MEGGER: KEW3125A SERIAL:W8330207 | Calibration date: N° 7722/24 10/07/2024

Comments: Nota 5: refer to PL C30000680

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-11-25	2024-11-26	
Signature	Digitaly signed by Francesco Zucca 2024-11-25T16:33:42.016Z	Digitaly signed by Giovanni Tangianu 2024-11-26T16:22:46.375Z	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

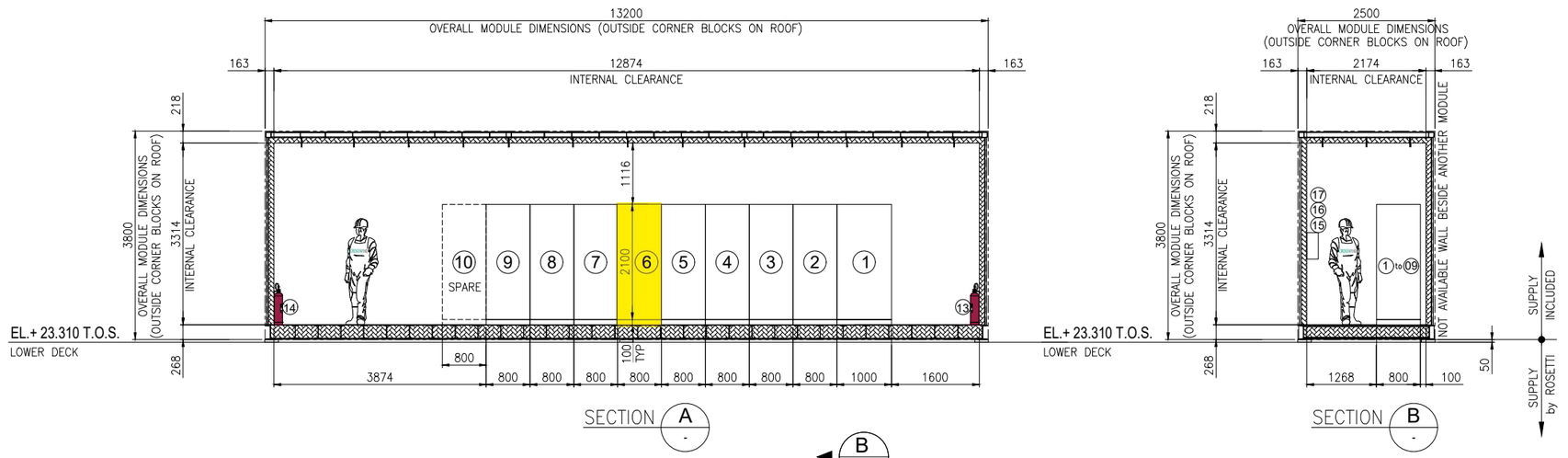
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SAM | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 04/03/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20101 | SHEET 001 | REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20101 REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

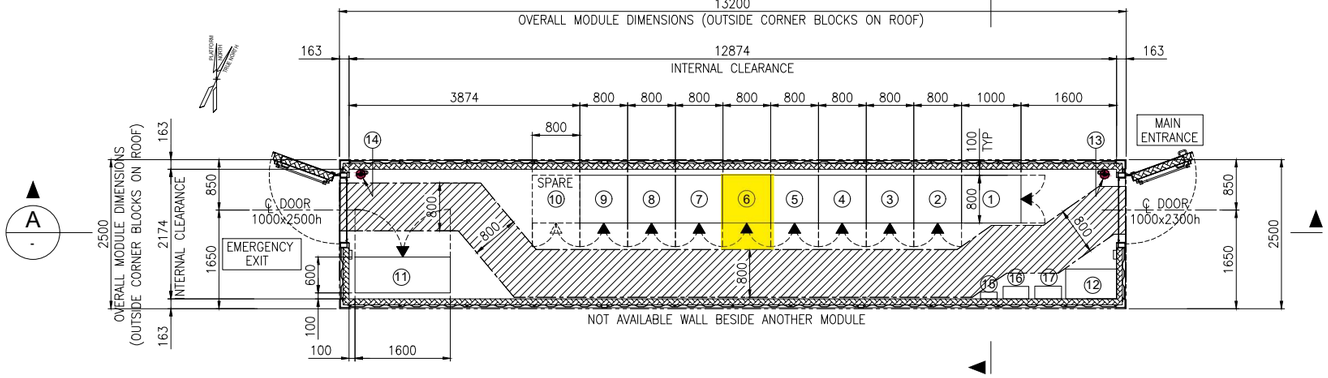
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

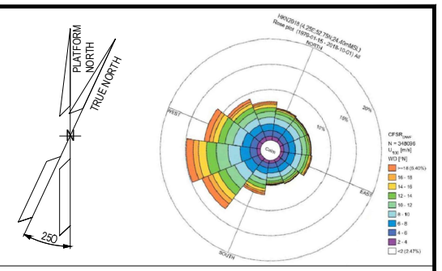
SECTION B -



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

EQUIPMENT LIST

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



NOTES

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

LEGEND

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

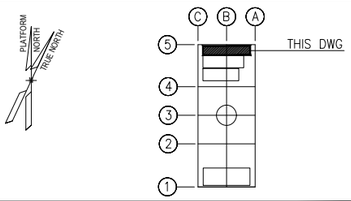
HOLDS

.

REFERENCE

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

KEY PLAN



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

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

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

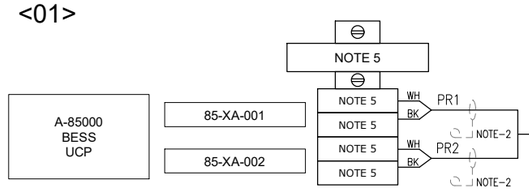
File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

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

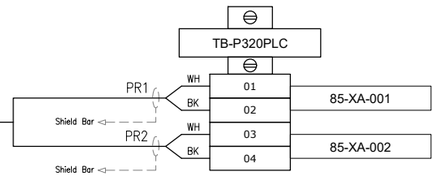
REV. 01

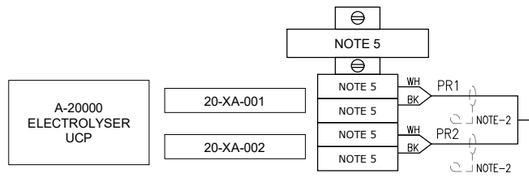
FIELD		I&T EQUIPMENT ROOM (ITER)
PACKAGE	CABLE NO	MARSHALLING CABINET
		~~B400-FGS-002~~ B400-FGS-003

<01>

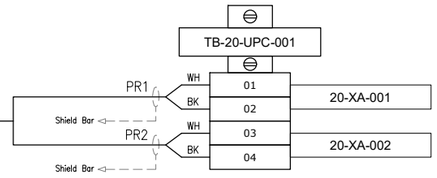


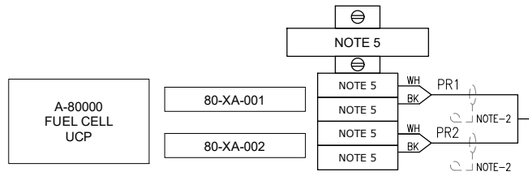
P320PLC/B400-FGS-003
~~P320PLC/B400-FGS-002~~
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS



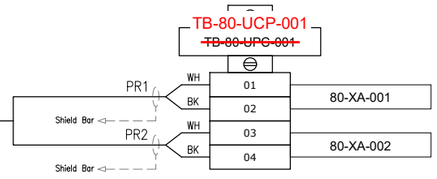


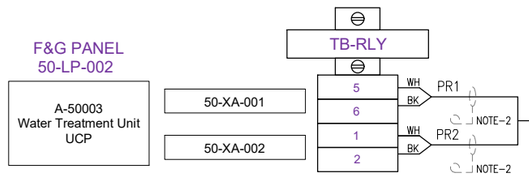
20-UCP-001/B400-FGS-003
~~20-UCP-001/B400-FGS-002~~
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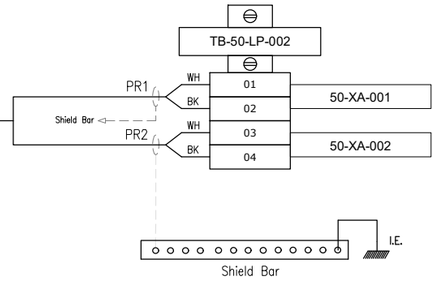


80-UCP-001/B400-FGS-003
~~80-UCP-001/B400-FGS-002~~
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS





50-LP-002/B400-FGS-003
~~50-LP-002/B400-FGS-002~~
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS



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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT– FGS WIRING DIAGRAMS
FIRE & GAS ALARM FROM PACKAGE

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 060	REV. 01

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

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

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. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

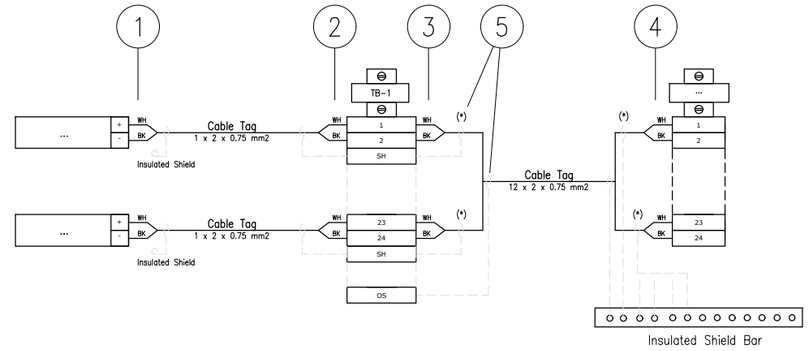
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

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

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

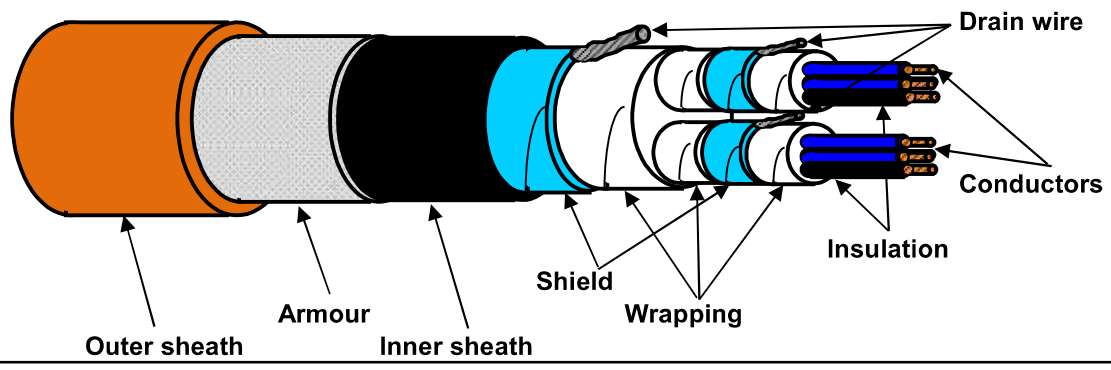
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
50-LP-002/B400-FGS-003	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						50-LP-002	Confirmed Gas Alarm	Lower Deck	50-XA-001/002	B400-FGS-003	Marshalling FGS	Lower Deck (B-400)		SMICV09-2X2X0,75	Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2x0,75mm² - Orange	M25	T2_M25_Double	M20	ADAP_M20 MxM25F	n.a.				L-SEC-21 / L-SEC-18C / L-SEC-18B / L-SEC-18A / B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-2C / B-400-SEC-2E / B-400-SEC-2F / I-MCT-403

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

2X2X0,75 - 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 (each core NUMBERED for PAIR identification)**	
Pair Assembling :	10/1mt	
Pair Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Pair Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Total Assembling :	5/1mt	
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 1,3 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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2X0,75 SQMM - MGT/XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(15,1 ± 10%) mm	
Over armour diameter :	(16,3 ± 10%) mm	
Outer diameter :	(19,3 ± 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 transmission will be used in the sense of the article 19 of the Regulation (UE) 2016/679 also to such subjects outside it, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

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ITEM	Tag	A-50000	: Water Treatment Package			Dwg	1724000448-MAC-DA-00005
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10002350		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CZX01I		Package - I

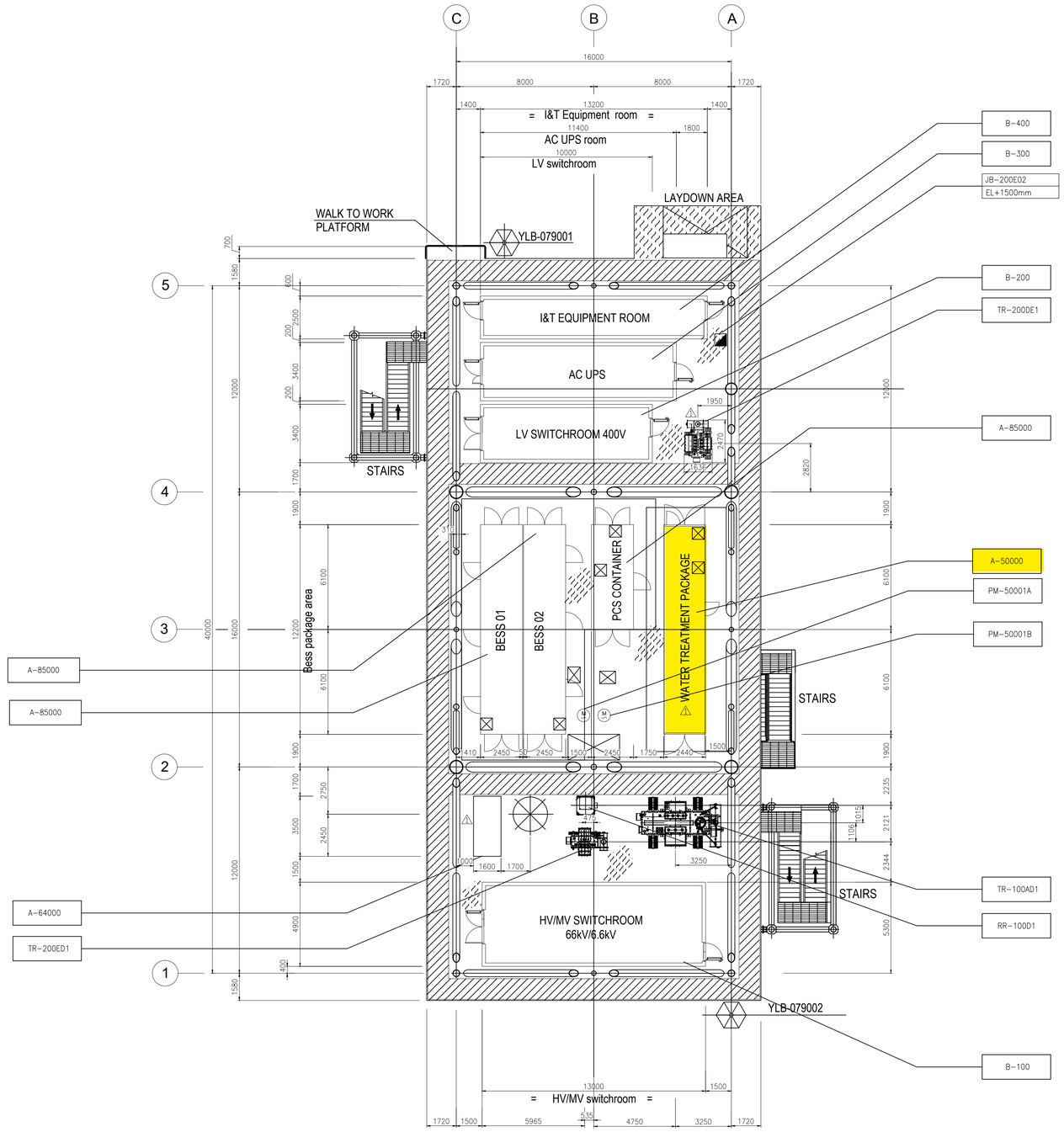
1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	OK
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	OK
4	Check that all equipment has been earthed and bonded.	PL
5	Check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

Comments:

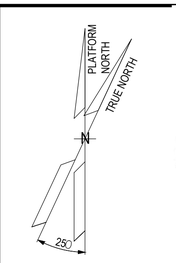
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-11-22	2024-11-26	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:38:08.437Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:53:01.690Z	

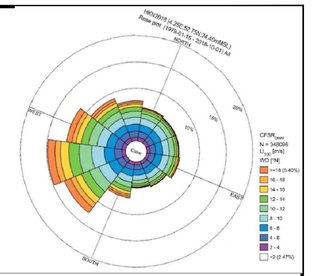
DRAWING NO. 123A90-DDL-EL-DL-20101

REV. 01



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





NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

(M)	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**

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

ROSETTI MARINO SpA

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

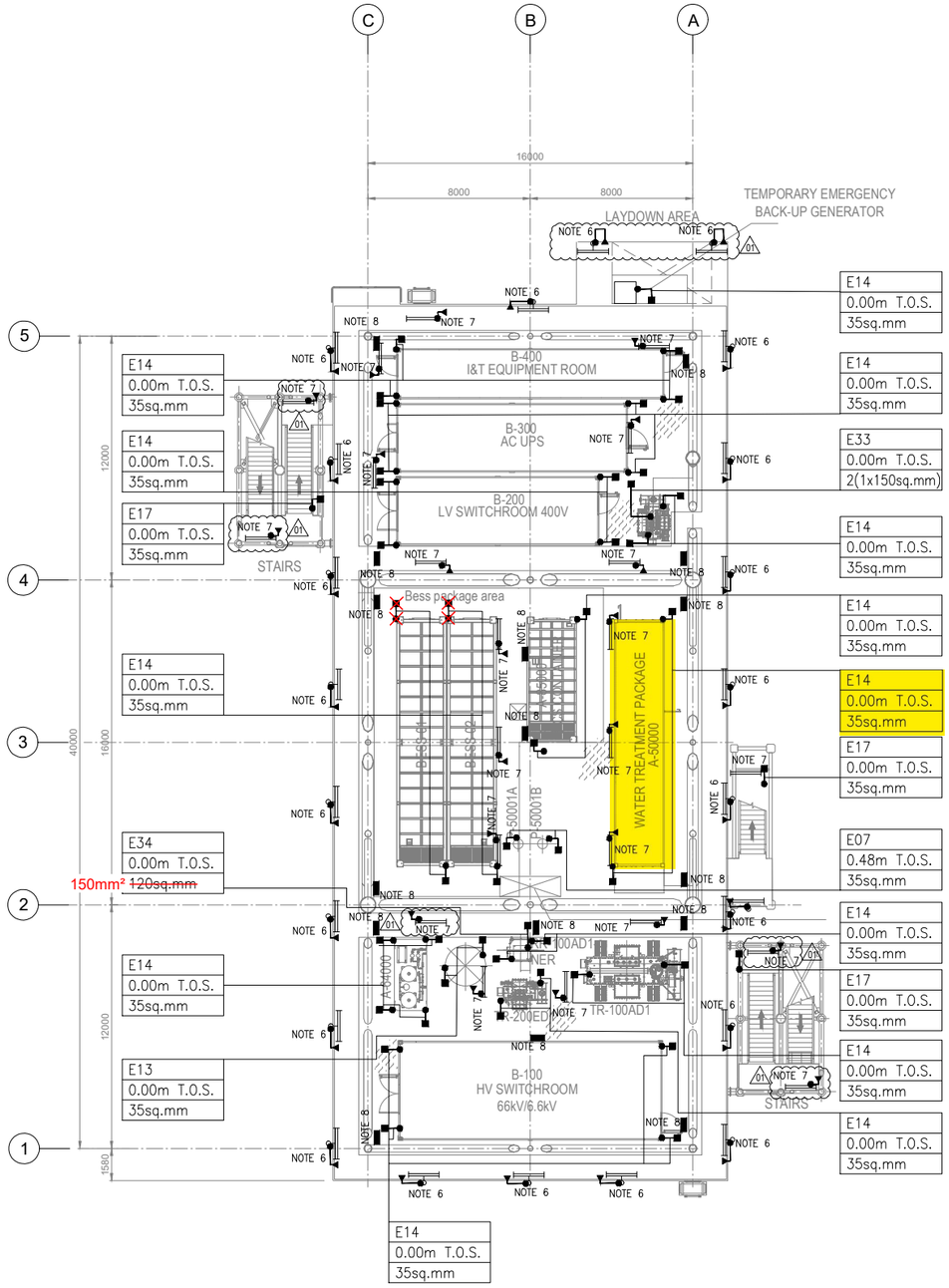
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SAM	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 04/03/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20101	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

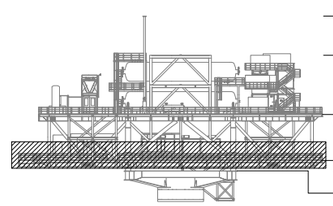
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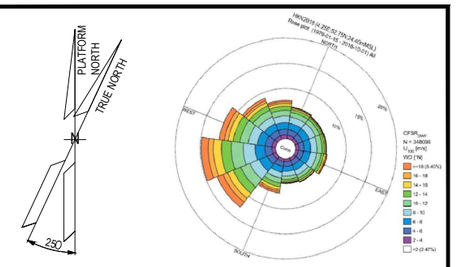
REV. 01



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

KEY PLAN





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DOCUMENT IS ONLY VALID FOR EARTHING LAYOUT.
4. ALL ELECTRICAL EQUIPMENT NOT DIRECTLY WELDED TO SKID FRAME SHALL BE BONDED TO STEEL TO THE STRUCTURE OF SKID BASEFRAME.
5. FOR LIGHTNING PROTECTION SYSTEM SURGE PROTECTIVE DEVICES (SPD), REFER TO THE DOCUMENT 123A90-DDL-EL-RE-20154.
6. ALL NON-WELDED POLES WILL BE EARTHED AS PER TYPICAL E05 AND E24. 01
7. ALL LINEAR LIGHTING FIXTURE WILL BE EARTHED AS PER TYPICAL E32.
8. EARTH BAR WILL BE FIXED TO THE PRIMARY BEAMS OF THE UPPER DECK. COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D / 6.00M T.O.S. / 35 SQ MM.
9. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE

LEGEND

- LIGHTING FIXTURE POLE MOUNTED
- LINEAR LIGHTING FIXTURE
- EARTHING BOSS AISI316L
- COMPRESSION TYPE LUG TINNED COPPER
- THREADED STUD FOR EARTHING CONNECTION
- Exx EARTHING TYPICAL CODE
- EARTHING BAR

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DD-20090	ELECTRICAL TYPICAL INSTALLATION DETAILS - EARTHING SYSTEM
123A90-DDL-EL-RE-20154	LIGHTNING PROTECTION SYSTEM CALCULATION REPORT
123A90-DDL-EL-DL-20119	LIGHTING & SOCKET LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20101	ELECTRICAL EQUIPMENT LAYOUT - LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	25/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
EARTHING & LIGHTNING LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN SPS	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 25/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20133	SHEET 001	REV. 01

SHEET 001 OF 002

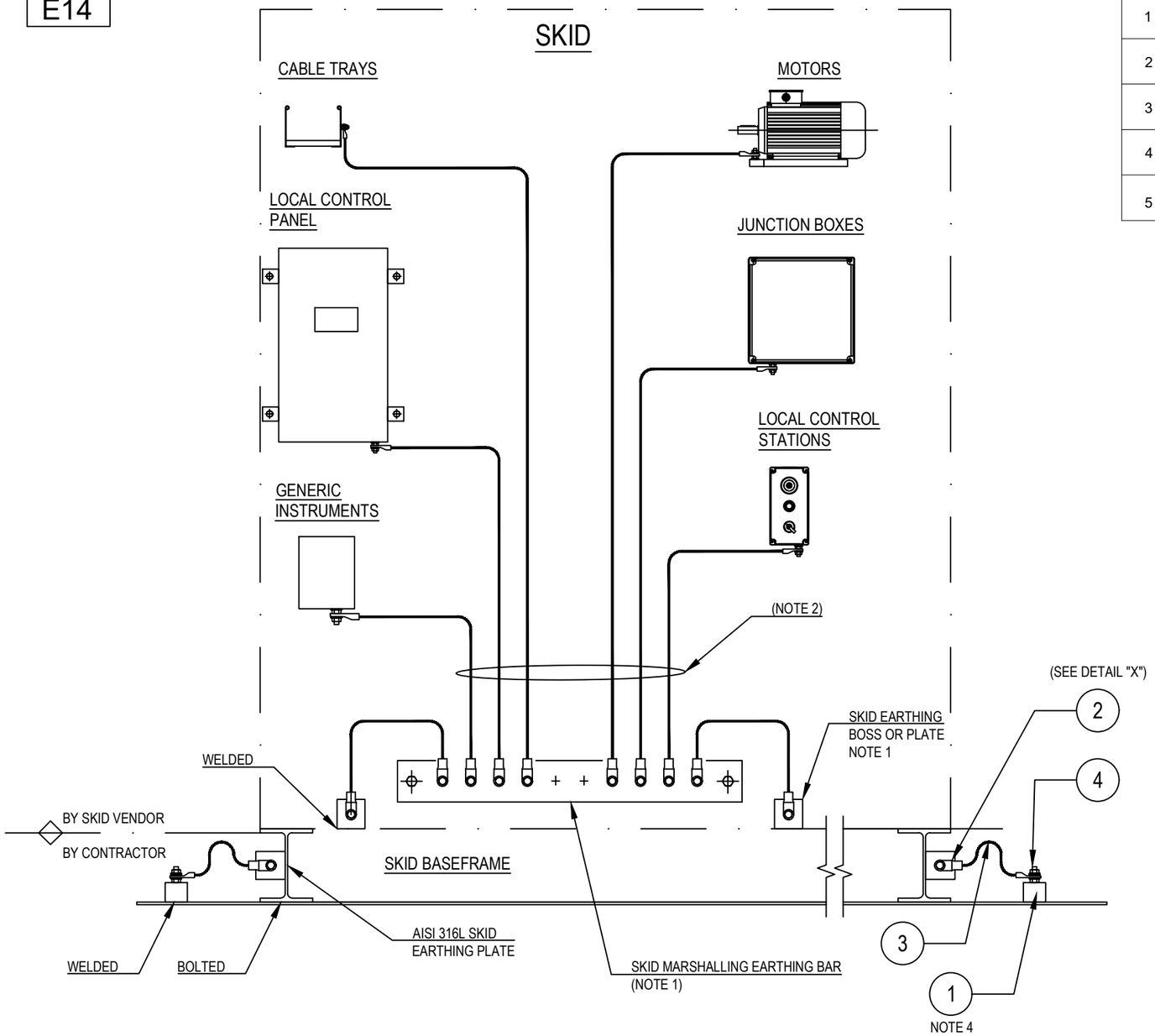
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20133**

REV.:	DATE:	SIGNATURE:
1_B	11/09/24	G.Randi

ROSETTI MARINO SpA

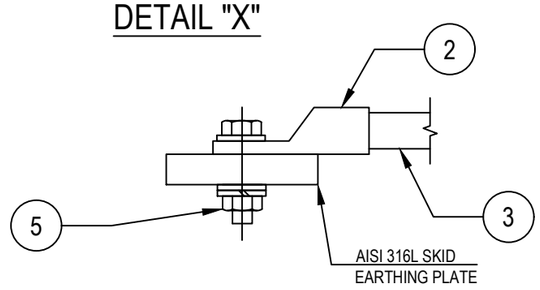
File Name : 123A90-DDL-EL-DL-20133

E14



POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50		NOTE 5
2	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER	35mm^2		NOTE 3
3	Y/G INSULATING COPPER CONDUCTOR	COPPER	35mm^2		NOTE 3
4	STUD BOLT WITH PLANE WASHER, SPRING WASHER AND NUT	AISI 316L	M10X50		
5	HEXAG. BOLT COMPLETE WITH PLANE WASHERS, SPRING WASHER AND NUT	AISI 316L	M10X30		

DETAIL "X"



NOTES:
1) EARTHING BAR/BOSS/PLATE SUPPLIED BY SKID MANUFACTURER
2) ALL EQUIPMENTS AND CABLE TRAYS WILL BE EARTHING ON SKID EARTHING BAR BY SKID MANUFACTURER
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY~~
4) FOR EARTHING BOSS TYPICAL DETAIL E11A
5) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

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

ROSETTI MARINO SpA

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR SKID BASEFRAME

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

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

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

DRAWING NO. DRAWING_NO.

REV. REV

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr

GAS CONFIRMED 50 XA 001 — F&G
SMOKE CONFIRMED 50 XA 002 — F&G
FAULT PACKAGE 50 XA 003 — ESD
50-XS-001 SHUT-DOWN — ESD
NOTE 6

CONTRACTOR | SUPPLIER

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
50 TT 001
50 TE 001
03
BLPH-MV-471
SD LO
NOTE 7
1"-SWS-290-01SD-E
1.1/2"
TP 017 50
E
4"x1.1/2"
4"x1.1/2"
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
ECC. RED.
ECC. RED.
BLPH-MV-241
3/4"

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005 50 03
123A90-DDL-PR-PID-80021
TO SEA WATER LIFT PUMP AND LIFT PUMP CAISSONS
1"-CI-029-01CP-E

1"-CI-043-01CP-E
TP 006 50 03
DECK
HOOK-UP 003
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

SUPPLIER | CONTRACTOR

TP 003 50 03
1.1/2"x1"
3"x1.1/2"
1"-SWR-045-01CS-H
123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

TP 007 50 03
1.1/2"x1"
1"-WW-038-01CS-H
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
7. ROUTED TO THE SEA. 03

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80022	SHEET 001	REV. 03

File Name : FILE_NAME

WTP FIRE AND GAS PANEL WIRING DIAGRAM
WATER TREATMENT PACKAGE

PSC

DOC. REF: PK2885-A-006

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	07/10/24	SIA	PSC	RM	ISSUE FOR REVIEW (IFR)

TITLE : WTP FIRE AND GAS PANEL WIRING DIAGRAM
WATER TREATMENT PACKAGE
COVER PAGE

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

SCALE : NTS

A3

DRAWING NO. 1724000448-MAC-DG-00036

SHEET 001

REV. 00

F.to UNI A3: 420mmx297mm

File Name : 1724000448-MAC-DG-00036 Rev. 00

REV.	DATA DATE	DESCRIZIONE DESCRIZIONE	DISEGN. DRAWN	CONTR. CHECK.	APPROV. APPROV.
1	23/09/2024	FOR CONSTRUCTION	D.O.	T.Z.	C.T.
0	16/08/2024	FOR APPROVAL	D.O.	T.Z.	C.T.

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Web: www.sia-italia.com E-mail: info@sia-italia.com

CLIENTE / CUSTOMER: PSC S.p.A.

PROGETTO / PROJECT: FIRE & GAS DETECTION SYSTEM FOR ELECTRICAL CONTAINER

COMMESSA N° / JOB N°: C24032

ARCHIVIO / FILE: C24032-WID-001_R1

A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

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TITOLO / TITLE:

SIA-5319 CONTROL PANEL

WIRING AND DIMENSIONAL DRAWING

DISEGNO N° / DRAWING N°	FORM	SCALA / SCALE	FOGLIO / FOGLIO	DI / OF
C24032-WID-001	A3	--	1	21

REVISION INDEX

Sheet	Description	Revision 0	1	2	3
1	COVER	X	X		
2	REVISION INDEX	X	X		
3	WIRES COLOUR CODE AND STANDARDS	X			
4	POWER SUPPLY DISTRIBUTION	X			
5	SIA-5319-RACK-R SLOT S-0	X			
6	24V POWER SUPPLY DISTRIBUTION	X			
7	RACK CONNECTIONS	X			
8	RACK 5319 SIA-R	X			
9	SIA-5319-RACK-R SLOT 1/2	X			
10	SIA-5319-RACK-R SLOT 3/4	X			
11	SIA-5319-RACK 1 SLOT 0	X			
12	SIA-5319-RACK 1 SLOT 1/2/3	X			
13	SIA-5319-RACK 1 SLOT 4/5/6	X	X		
14	SIA-5319-RACK 1 SLOT 7/8/9	X			
15	SIA-5319-RACK 1 SLOT 10/11/12	X			
16	SIA-5319-RACK 1 SLOT 13	X			
17	RACKS DETAIL	X			
18	FRONT & SIDE VIEW	X			
19	TOP & BOTTOM VIEW	X			
20	INTERNAL MOUNTING PLATE VIEW	X	X		
21	MATERIAL LIST	X	X		
22	DEVICES TYPICAL CONNECTION	X	X		
23					
24					
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REVISION INDEX

Sheet	Description	Revision 0	1	2	3	4	5	6
40								
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REFERENCE DRAWINGS

DOC.No.	DESCRIPTION
C24032-DSH-001	FIRE & GAS SYSTEM INSTRUMENT DATASHEET
C24032-BLK-001	FIRE & GAS SYSTEM BLOCK DIAGRAM
C24032-LAY-001	FIRE & GAS SYSTEM LAYOUT

GENERAL NOTES

1) ISOLATED BARS ARE MOUNTED NEAR TERMINAL STRIPS FOR CABLE SHIELDS CONNECTIONS.

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A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

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TITOLO
WIRING & DIMENSIONAL DRAWING REVISION INDEX
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	2	3

ELECTRICAL SYMBOLS

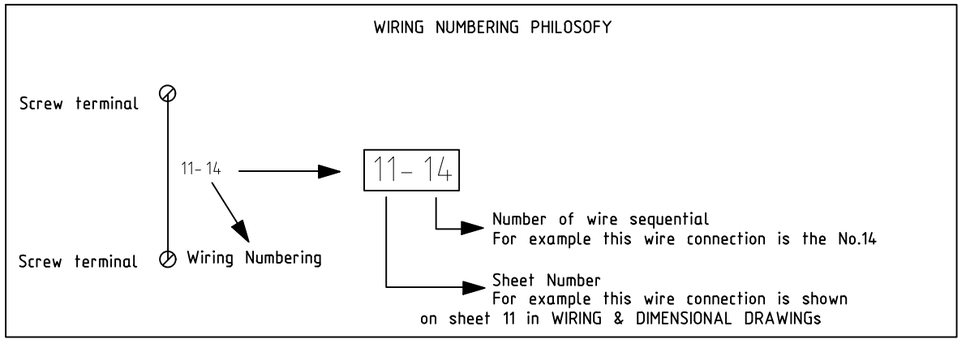
SYMBOL	DESCRIPTION
Fx	FUSED SWITCH
QFx	AUTOMATIC SWITCH
PE	PROTECTION EARTH
IE	INSTRUMENT EARTH
BATT+	BATTERIES
Ux xxA +V −V	POWER SUPPLY
CB xxA +V −V	BATTERY CHARGER
R	TEST BATTERY RESISTOR
⊘	TERMINAL WITH SCREW
TSxx	TERMINAL BOARD LABEL
BZ	LOCAL SOUNDER
FL	POWER SUPPLY FILTER

WIRING IDENTIFICATION

DESCRIPTION	IDENTIFIC.	COLOUR	TYPE & WIRING SIZE (mm2)
AC PHASE	L	BROWN	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5
AC NEUTRAL	N	BLUE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5 & 1.5
PROTECTION EARTH	PE	YELLOW/GREEN	Unipolar cable - FS17 - 450/750 V, Cross-sec. 2.5 & 6
POSITIVE DC POWER	+	RED	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1.5
NEGATIVE DC POWER	-	BLACK	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1.5
DC SIGNAL		WHITE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1
RELAY SIGNAL (FREE VOLTAGE)		ORANGE	Unipolar cable - FS17 - 450/750 V, Cross-sec. 1

ACCORDING TO: CEI EN 60445
ALL INTERNAL WIRES: CPR Compliant 305/2011/EU (Standard: EN50575:2014+A1:2016 Class Cca-S3, d1, a3)

WIRING NUMBERING PHILOSOFY



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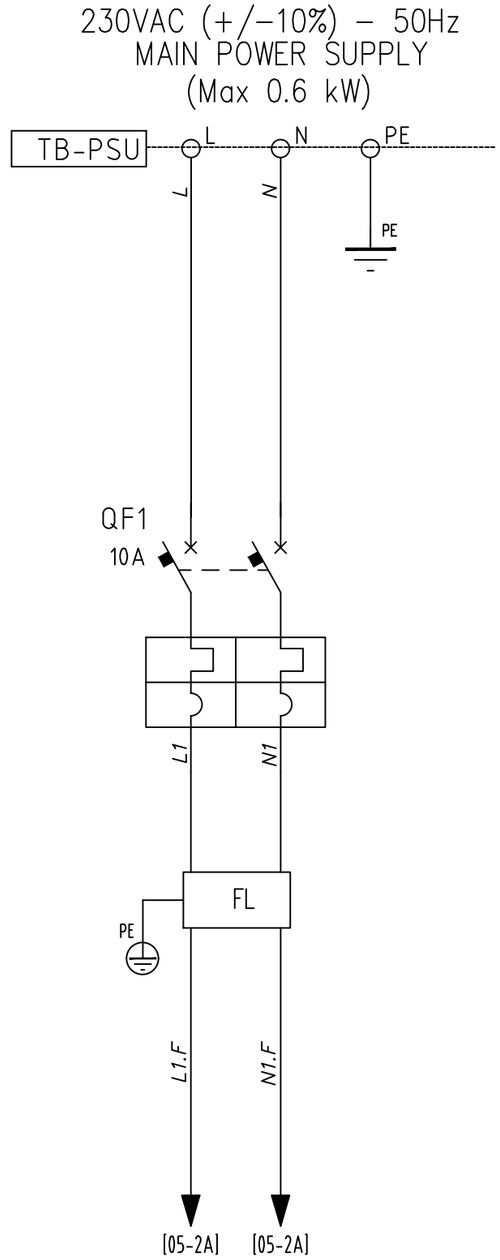
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TITOLO
WIRING & DIMENSIONAL DRAWING
WIRES COLOUR CODE AND STANDARDS
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	3	4



SIA® FIRE FIGHTING SYSTEMS

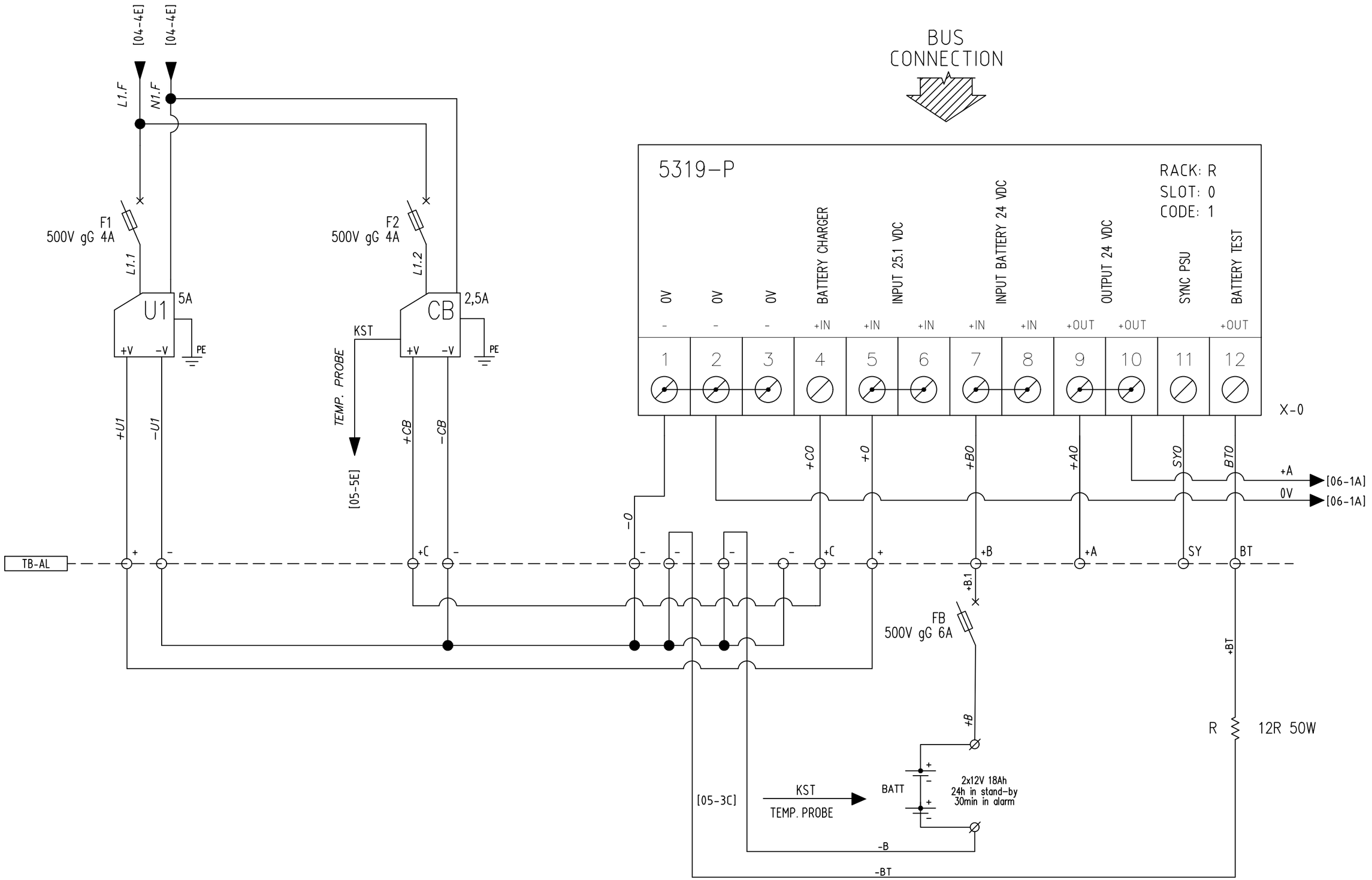
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TITOLO
WIRING & DIMENSIONAL DRAWING POWER SUPPLY DISTRIBUTION
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	4	5



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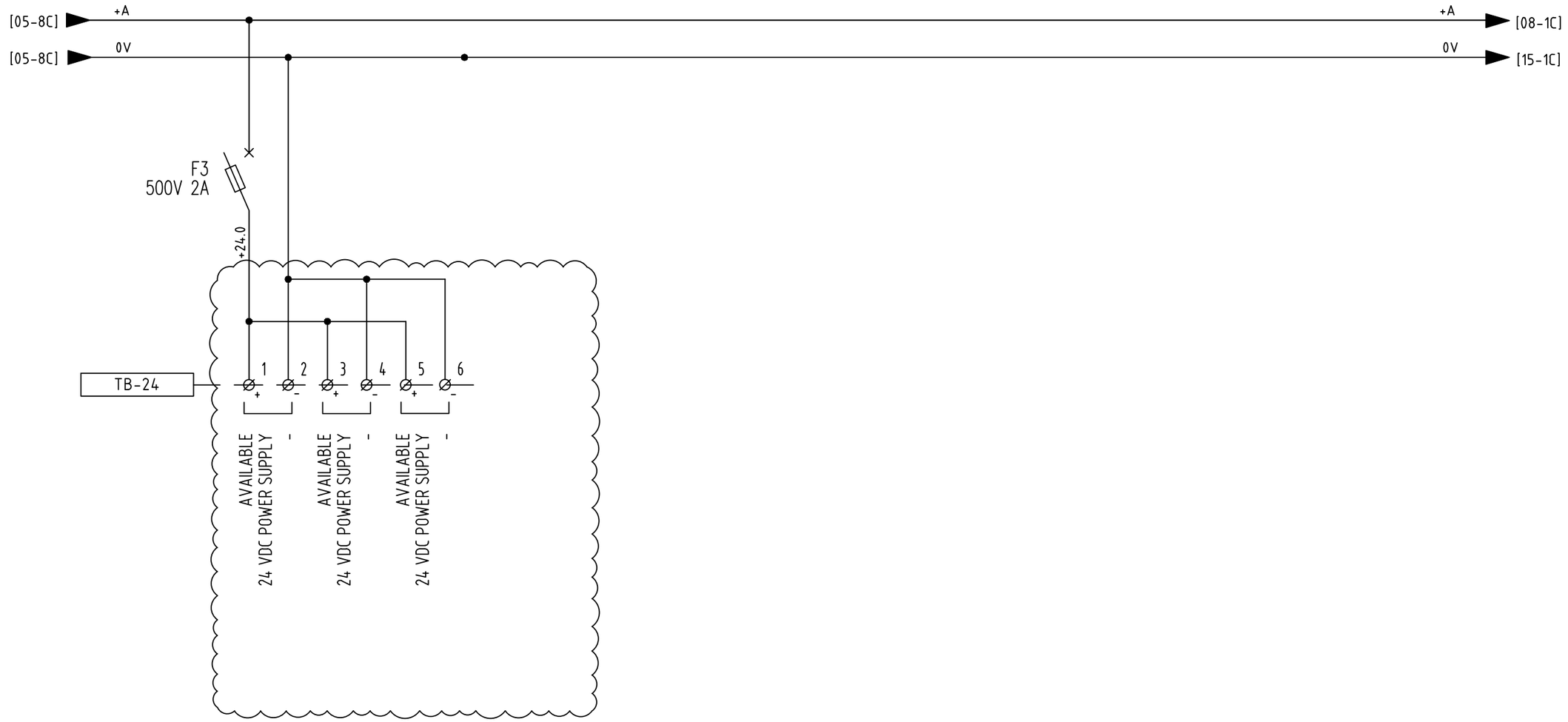
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TITOLO

WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT S-0

TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	5	6



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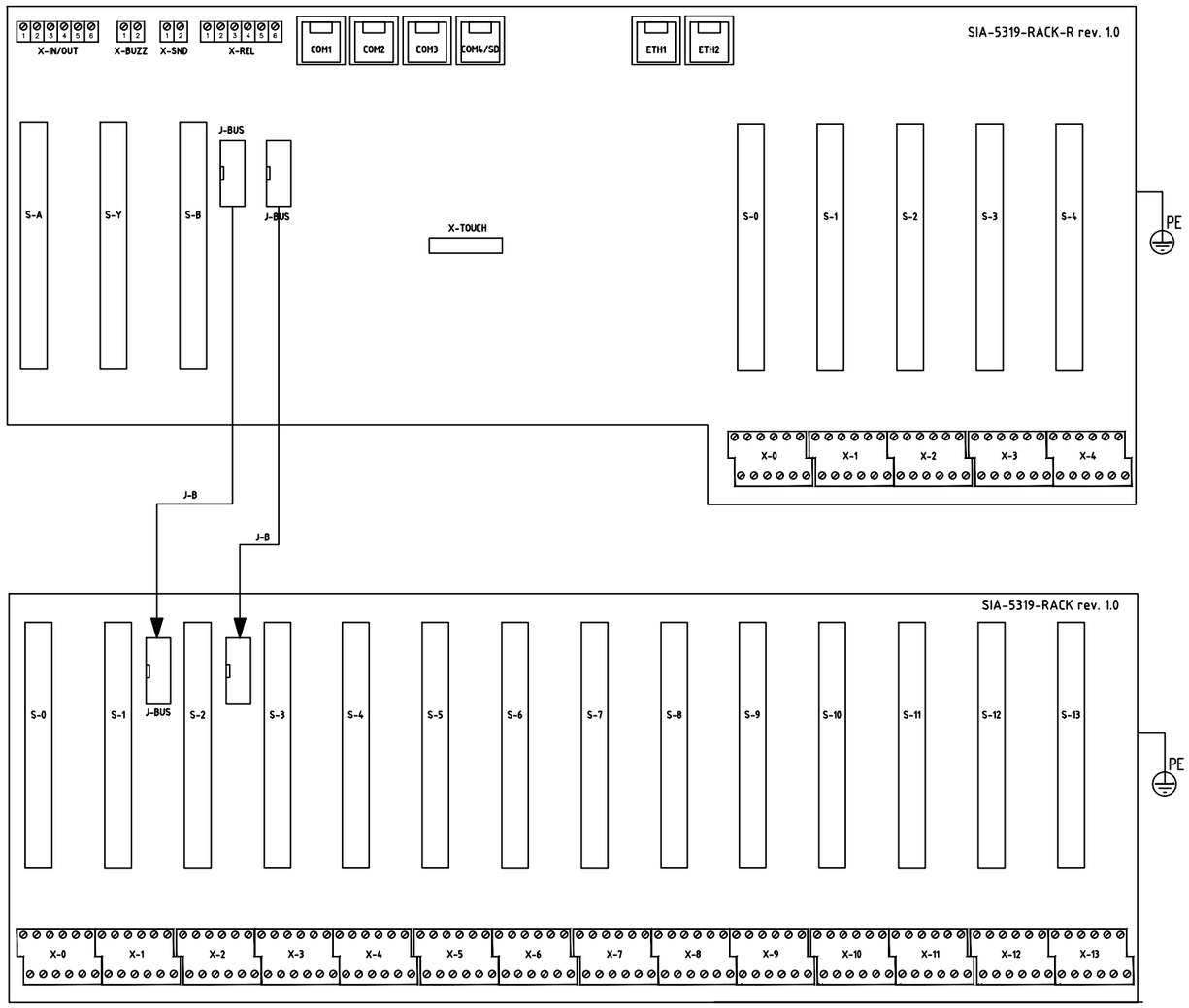
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TITOLO

WIRING & DIMENSIONAL DRAWING
24V POWER SUPPLY DISTRIBUTION

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R0	6	7
DRAWING N°			SHEET	FOLLOW



SIA® FIRE FIGHTING SYSTEMS

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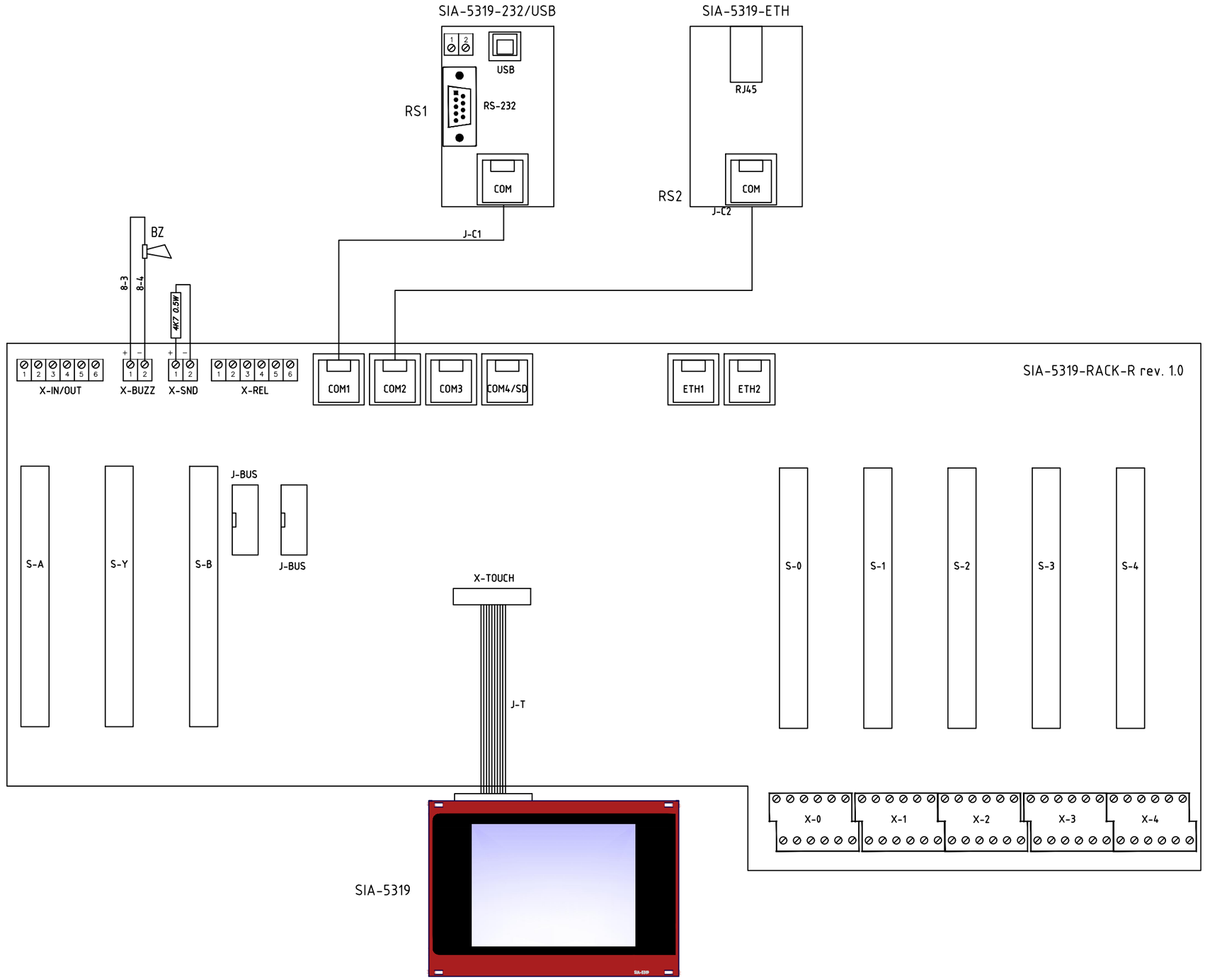
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TITOLO
WIRING & DIMENSIONAL DRAWING RACK CONNECTIONS
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	7	8



SIA® FIRE FIGHTING SYSTEMS

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A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

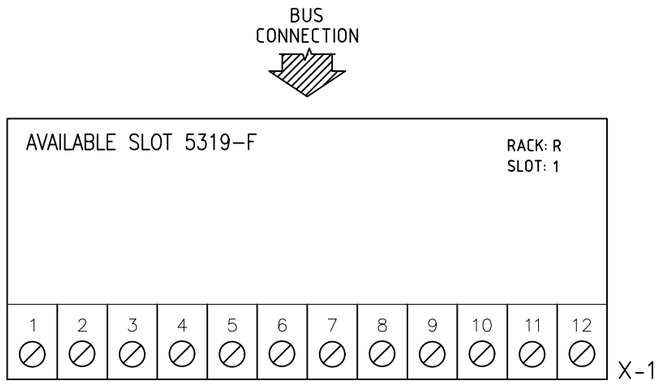
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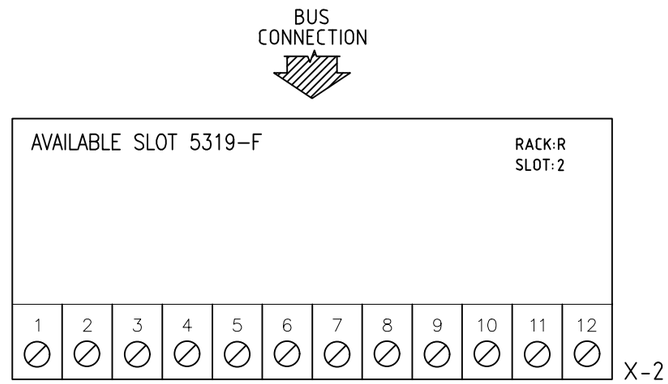
TITOLO

WIRING & DIMENSIONAL DRAWING RACK 5319 SIA-R

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R0	8	9
DRAWING N°			SHEET	FOLLOW





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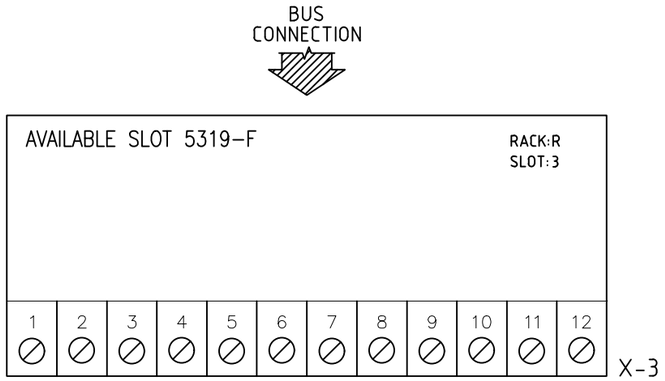
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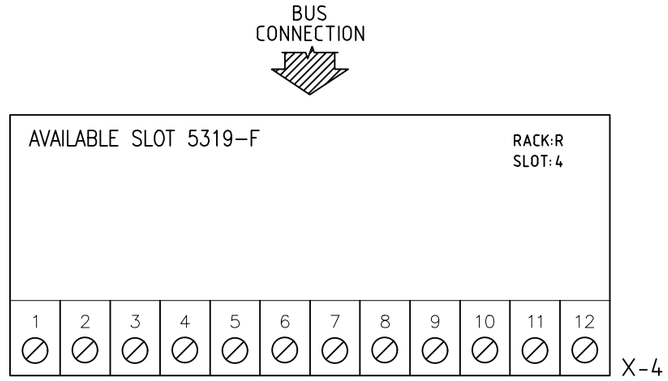
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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT 1/2
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	9	10





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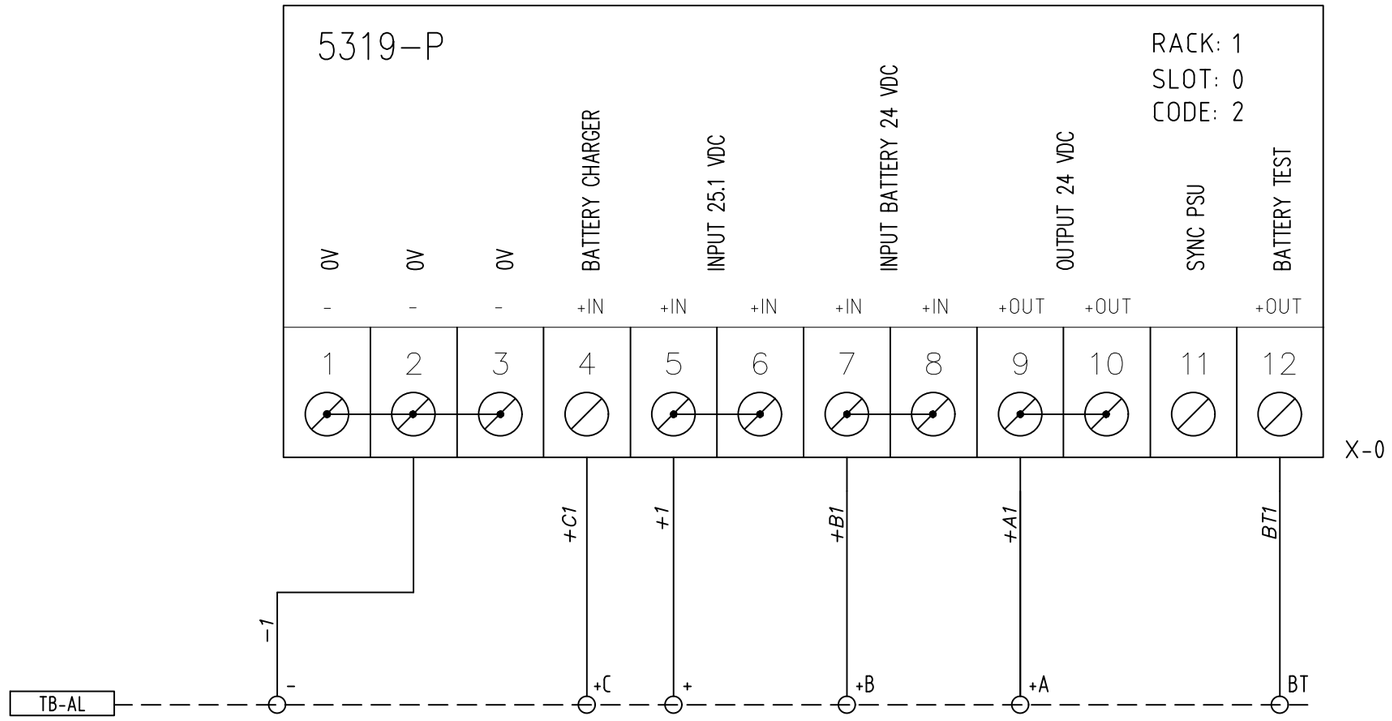
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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-R SLOT 3/4
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	10	11

BUS
CONNECTION



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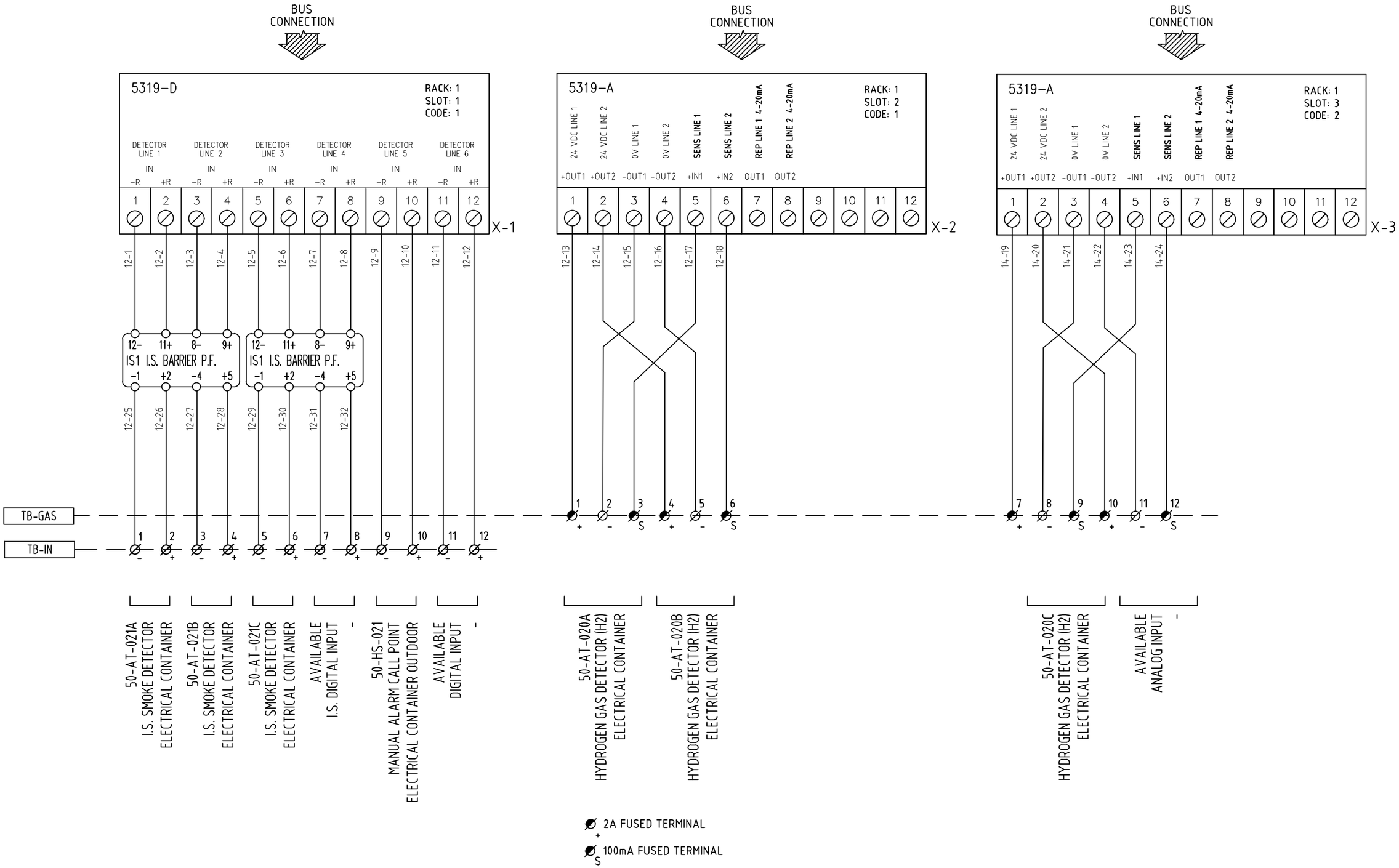
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TITOLO
WIRING & DIMENSIONAL DRAWING
SIA–5319–RACK–1 SLOT 0
TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032–WID–001	A3	R0	11	12
DRAWING N°			SHEET	FOLLOW



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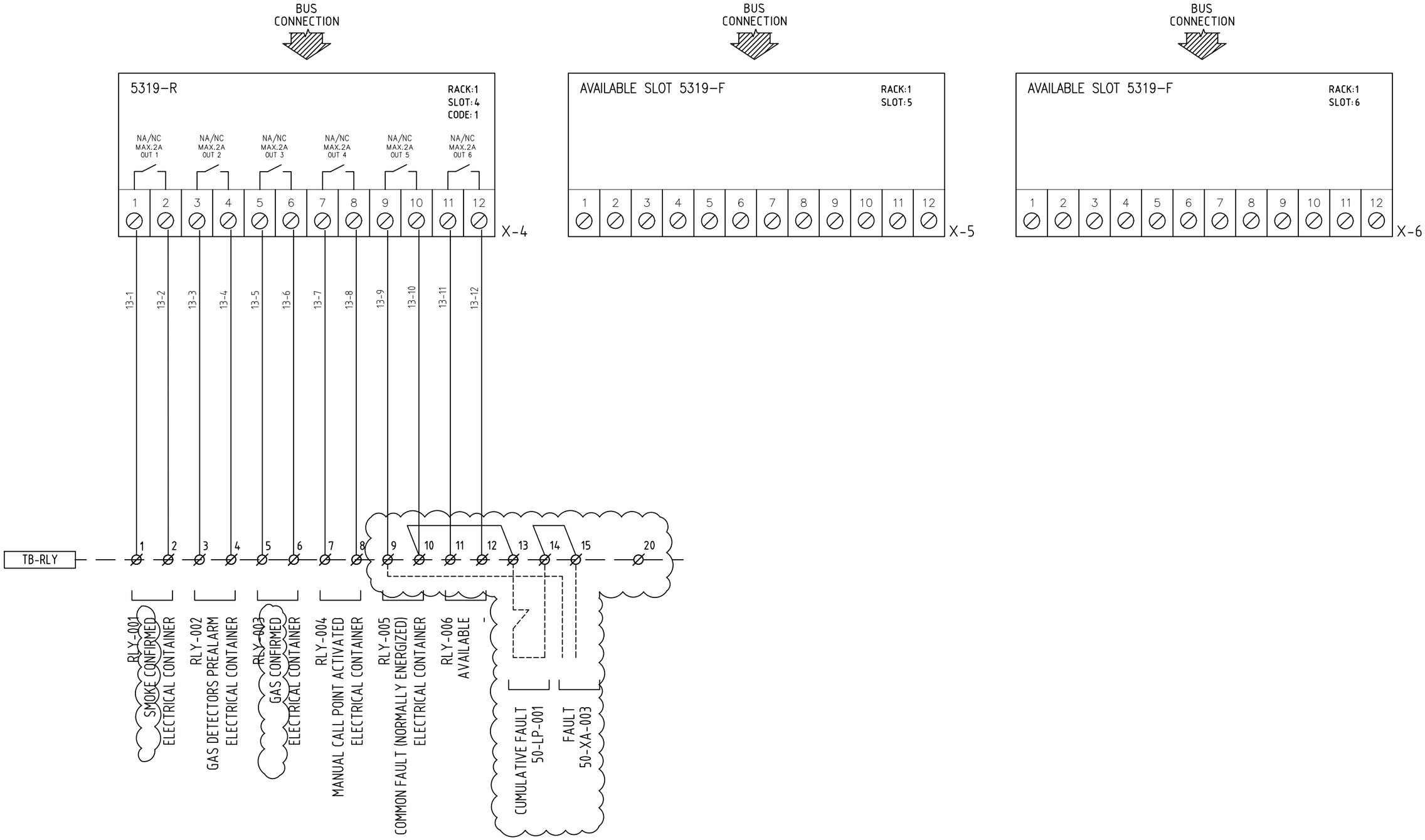
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TITOLO

WIRING & DIMENSIONAL DRAWING
SIA–5319–RACK–1 SLOT 1/2/3

TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032–WID–001	A3	R0	12	13
DRAWING N°			SHEET	FOLLOW



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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-1 SLOT 4/5/6
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	13	14

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:7

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-7

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:8

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-8

BUS CONNECTION

AVAILABLE SLOT 5319-F

RACK:1
SLOT:9

1	2	3	4	5	6	7	8	9	10	11	12
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

X-9

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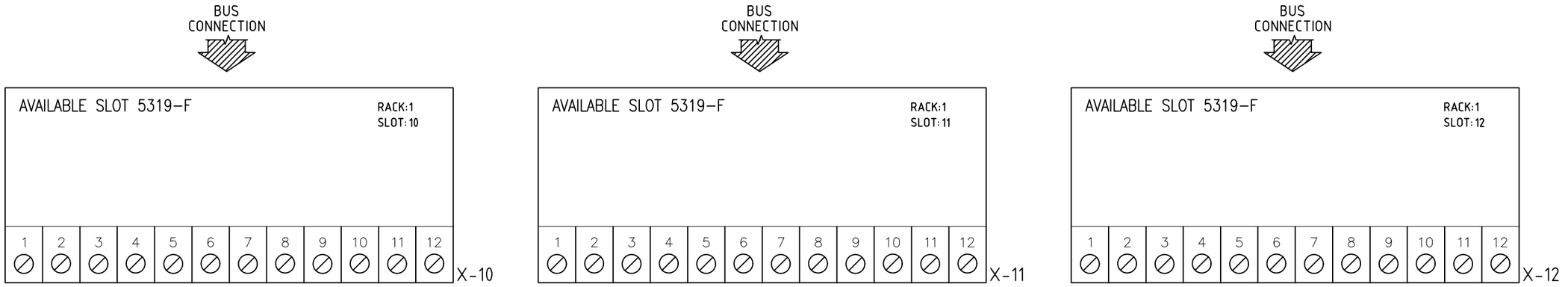
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TITOLO

WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-1 SLOT 7/8/9

TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	14	15



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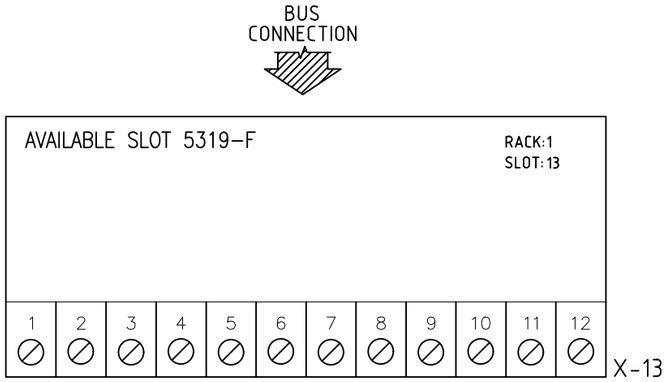
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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-1 SLOT 10/11/12
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	15	16



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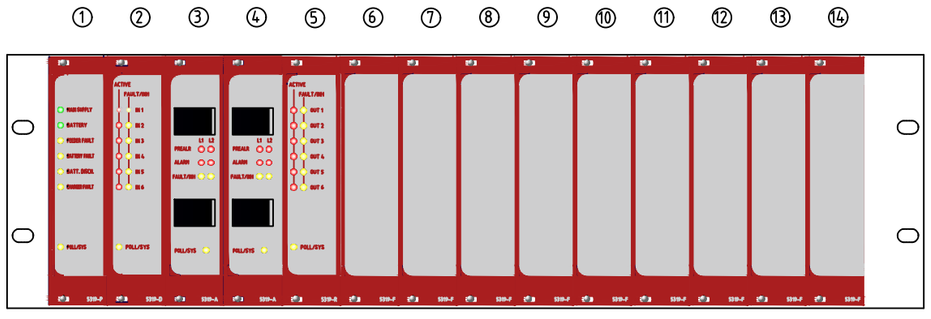
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TITOLO
WIRING & DIMENSIONAL DRAWING SIA-5319-RACK-1 SLOT 13
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	16	17





R24 R25 R26 R27 R28

SIA-5319-RACK-R					
POS.	BOARD	DESCRIPTION	POS.	BOARD	DESCRIPTION
1	5319-C	CPU MODULE	8	5319-F	AVAILABLE SLOT
2	5319-Y	SYSTEM MODULE			
3	5319-C	CPU MODULE			
4	5319-P	POWER CONTROL MODULE			
5	5319-E	ADDRESSABLE LOOP MODULE			
6	5319-F	AVAILABLE SLOT			
7	5319-F	AVAILABLE SLOT			

R25 R27 R29 R31 R35

SIA-5319-RACK (1)					
POS.	BOARD	DESCRIPTION	POS.	BOARD	DESCRIPTION
1	5319-P	POWER CONTROL MODULE	8	5319-F	AVAILABLE SLOT
2	5319-D	6 SUPERV. INPUT MODULE	9	5319-F	AVAILABLE SLOT
3	5319-A	4-20mA INPUT MODULE	10	5319-F	AVAILABLE SLOT
4	5319-A	4-20mA INPUT MODULE	11	5319-F	AVAILABLE SLOT
5	5319-R	6 RELAY OUTPUT MODULE	12	5319-F	AVAILABLE SLOT
6	5319-F	AVAILABLE SLOT	13	5319-F	AVAILABLE SLOT
7	5319-F	AVAILABLE SLOT	14	5319-F	AVAILABLE SLOT

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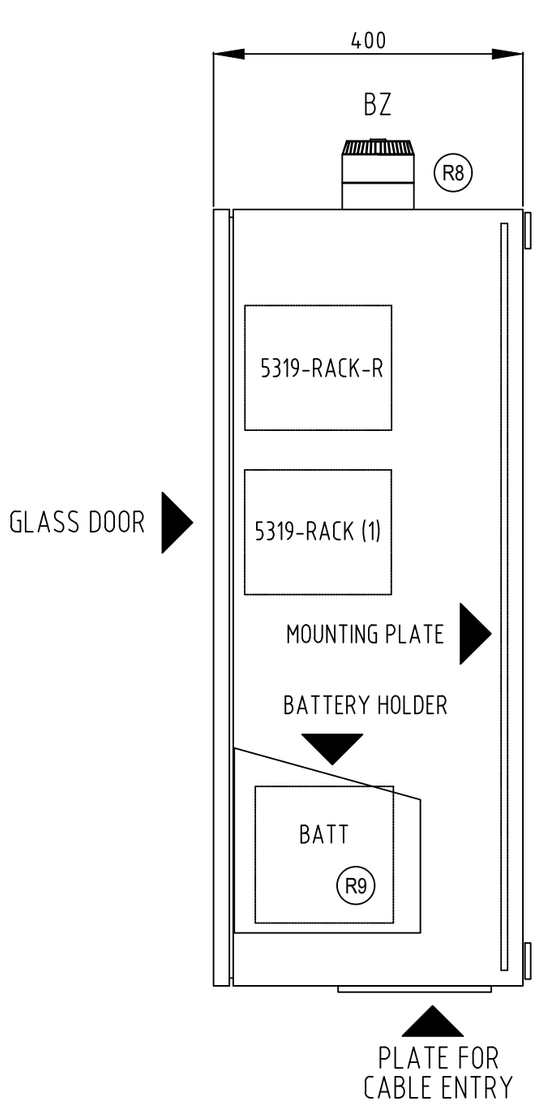
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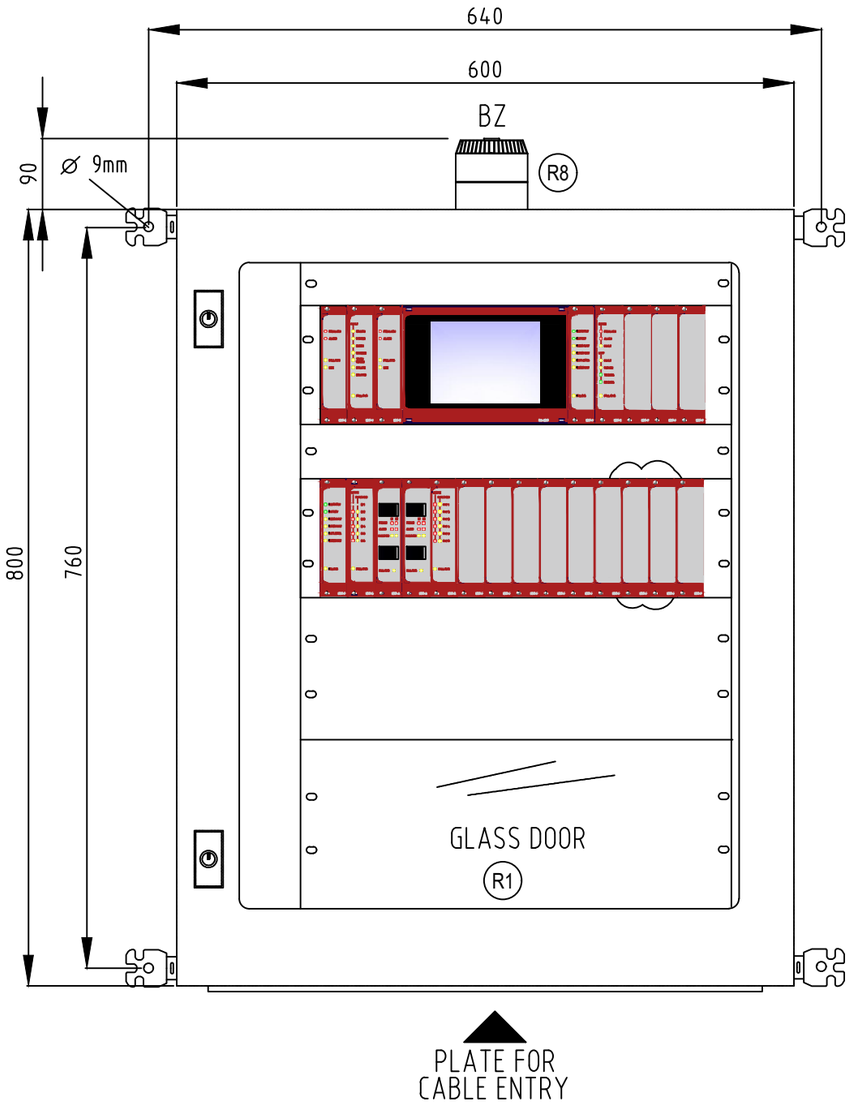
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TITOLO
WIRING & DIMENSIONAL DRAWING RACKS DETAIL
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	17	18





PANEL DETAILS:

- ALL WIRE ARE IN TYPE OF ADEGUATE SECTION
- EACH ELECTRICAL TERMINATION AND EQUIPMENT WITH TAG NUMBER & TERMINAL
- INLET POWER 230 Vac - 50HZ - 0.6 kW MAX
- PROTECTION DEGREE: IP54
- CABINET COLOR: RAL 7035
- DIMENSION 600 w x 400 d x 800 h (mm)

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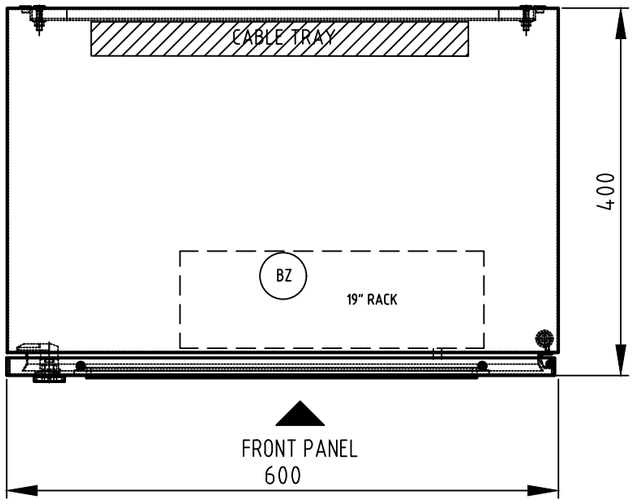
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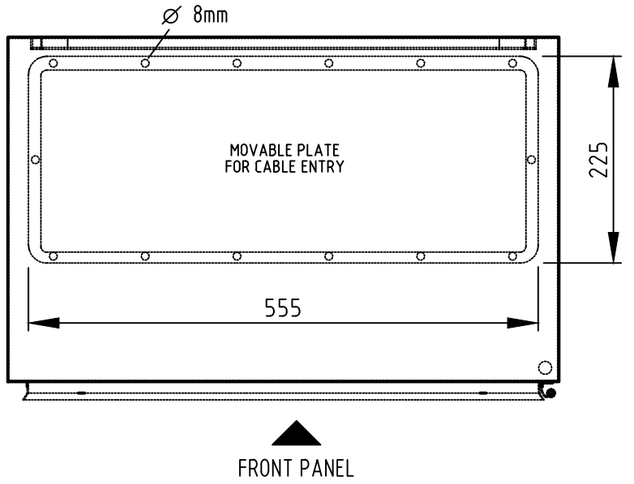
TITOLO
WIRING & DIMENSIONAL DRAWING FRONT & SIDE VIEW
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	18	19

TOP VIEW



BOTTOM VIEW



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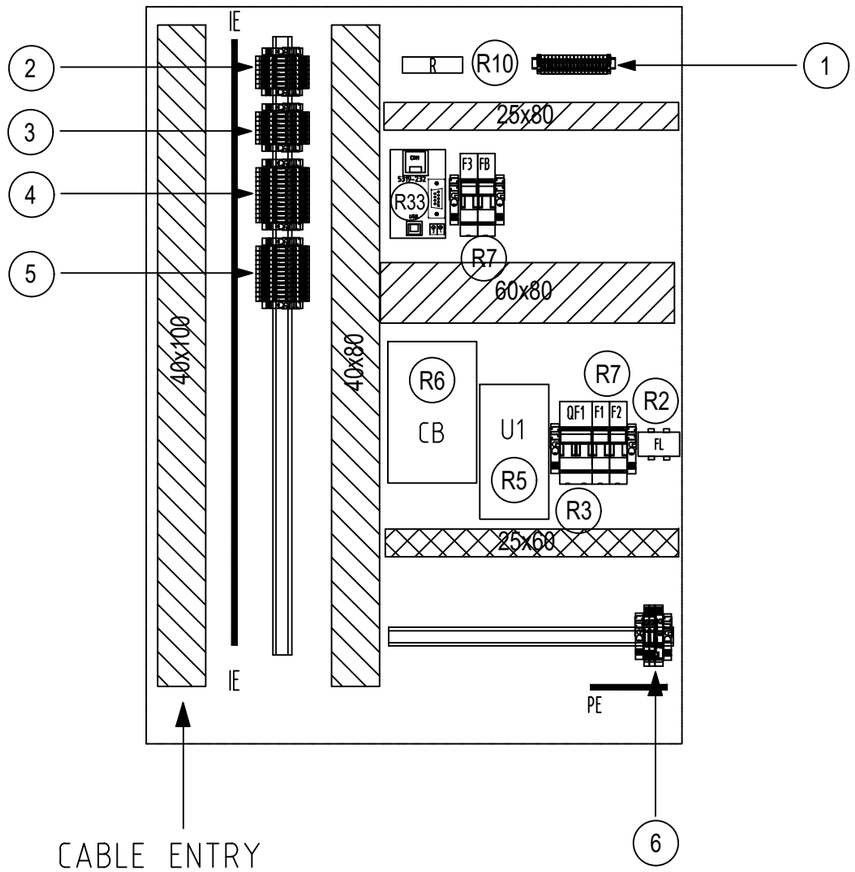
TITOLO

WIRING & DIMENSIONAL DRAWING TOP & BOTTOM VIEW

TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R0	19	20

INTERNAL MOUNTING PLATE - FRONT VIEW



R11 R12 R13 R14

TERMINAL BOARDS		
POS.	DESCRIPTION	Q.ty
1	TB-AL	19
2	TB-24	6
3	TB-IN	12
4	TB-GAS	12
5	TB-RLY	20
6	TB-PSU	3
7		
8		
9		
10		
11		
12		
13		
14		
15		

24VDC CABLE DUCT

220VAC CABLE DUCT

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TITOLO
WIRING & DIMENSIONAL DRAWING
INTERNAL MOUNTING PLATE VIEW
TITLE

DISEGNO N°	FORM	REV	FOGLIO	SEGUE
C24032-WID-001	A3	R1	20	21
DRAWING N°			SHEET	FOLLOW

MATERIAL LIST

REF. (Rxx)	Q.ty	DESCRIPTION	MANUFACT.	MODEL	LABEL
R1	1	PANEL 800Hx600Wx400D c/w ACCESSORIES	DKC	R5CEX0864	
R2	1	SUPPRESSOR FILTER	SCHAFFNER	FN2010-6-06	FL
R3	1	CIRCUIT BREAKER 10A	SCHNEIDER ELECTRIC	A9F64210 - Curve C	QF1
R4					
R5	1	POWER SUPPLY 10A	WEIDMULLER	PRO ECO 120W 5A	U1
R6	1	BATTERY CHARGER 2,5A	BENTEL	BAQ60T24	CB
R7	4	FUSE HOLDER WITH FUSE (RATING IN RELEVANT SH.)	SCHNEIDER ELECTRIC	A9N15636	FB, F1, F2, F3
R8	1	HORN	ROSHNI	ROLP-V	BZ
R9	2	BATTERIES	ZENITH (or equivalent)	12V 18Ah	BATT
R10	1	TEST BATTERY RESISTANCE	CGS-TYCO	HSC50 12R	R
R11	19	FEED-THRU TERMINAL	CONTACLIP	RK 1,5-4/15	TB-AL
R12	2+1	FEED-THRU TERMINAL	WEIDMULLER	WDU6+WPE6 - 6 mm2	TB-PSU
R13	42	FEED-THRU TERMINAL	WEIDMULLER	WDU2.5 - 2.5 mm2	TB-24, TB-IN, TB-GAS, TB-RLY
R14	8	FUSED TERMINAL	WEIDMULLER	WSI6 - 6 mm2	TB-GAS
R15					
R16					
R17					
R18					
R19					
R20					
R21					
R22					
R23					
R24	1	OPERATOR PANEL	SIA	SIA-5319-RACK-R	
R25	1	RACK FOR MODULES	SIA	SIA-5319-RACK	
R26	2	CPU CARD	SIA	5319-C	
R27	2	POWER CONTROL CARD	SIA	5319-P	
R28	1	COMMON SIGNALING CARD	SIA	5319-Y	
R29	1	6 DIGITAL SPRV. INPUT CARD	SIA	5319-D	
R30					
R31	1	6 RELAY OUTPUT CARD	SIA	5319-R	
R32					
R33	1	RS-232 SERIAL INTERFACE CARD	SIA	SIA-5319-232/USB	RS1
R34					
R35	2	DUAL CHANNEL 4-20 mA ANALOG INPUT CARD	SIA	5319-A	
R36					

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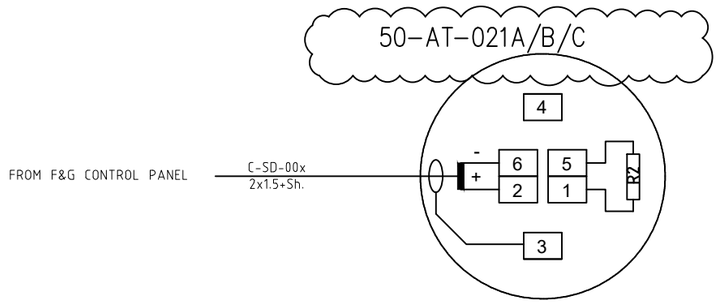
A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

THIS DRAWING IS LEGALLY EXCLUSIVE PROPERTY OF SIA S.r.l. AND CANNOT BE REPRODUCED NEITHER SHOWN TO A THIRD PARTY WITHOUT WRITTEN ASSENT

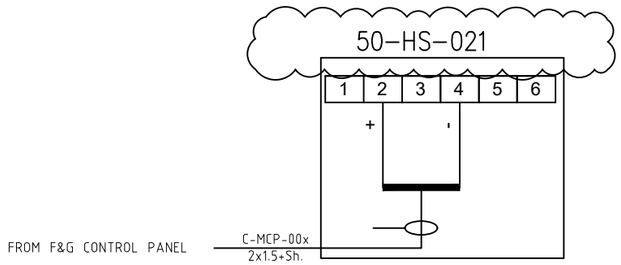
TITOLO
WIRING & DIMENSIONAL DRAWING
MATERIAL LIST
TITLE

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032-WID-001	A3	R1	21	22

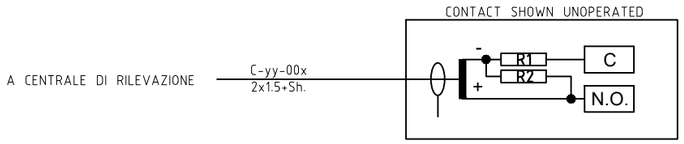
INTRINSICALLY SAFE SMOKE DETECTOR



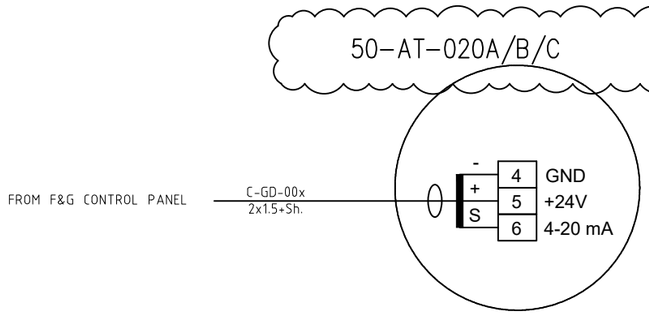
MANUAL ALARM CALL POINT



DIGITAL INPUTS ON 5319-D CARD



HYDROGEN GAS DETECTOR (H2)



RESISTOR LEGEND

R1= 820R - 2 Watt
R2= 4k7R - 1/2 Watt

SIA® FIRE FIGHTING SYSTEMS

S.I.A. - Safety Industrial Applications s.r.l.

Via Aldo Moro 6 20005 Pogliano Milanese (MI) – ITALY
Tel.: +39 02–35969811 – Fax: +39 02–93541837
Web: www.sia–italia.com E–mail: info@sia–italia.com

A TERMINE DI LEGGE LA SIA s.r.l. SI RISERVA LA PROPRIETA' DEL PRESENTE DISEGNO E NE VIETA LA RIPRODUZIONE O LA COMUNICAZIONE A TERZI SENZA IL PROPRIO BENESTARE SCRITTO

THIS DRAWING IS LEGALLY EXCLUSIVE PROPERTY OF SIA S.r.l. AND CANNOT BE REPRODUCED NEITHER SHOWN TO A THIRD PARTY WITHOUT WRITTEN ASSENT

TITOLO / TITLE: WIRING & DIMENSIONAL DRAWING
DEVICES TYPICAL CONNECTION

DISEGNO N° / DRAWING N°	FORM	REV	FOGLIO / SHEET	SEGUE / FOLLOW
C24032–WID–001	A3	R1	22	–

FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-FGS-002

JUNCTION BOX
950-JE-05104

PSC ◀▷ Customer

TB-1

SOUNDER — 950-XZ-05201 (+ / −)

AMBER — 950-XL-05201 (+ / −)

RED — 950-XL-05202 (+ / −)

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

950-JE-05104/B400-FGS-002
12x2,5mmq
(By Others)

TB-950-JE-051004

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

F&G PANEL
50-LP-002

PSC ◀▷ Customer

TB-XXX

GAS CONFIRMED
50-XA-001

SMOKE CONFIRMED
50-XA-002

50-LP-002/B400-FGS-002
2x2x0,75mmq
(By Others)

TB-XXX

PSC ◀▷ Customer

MANUAL
FIRE ALARM

950-MFA-05201 (+ / −) WH / BK

950-MFA-05201/B400-FGS-002
2x0,75mmq
(By Others)

TB-XXX

WH / BK

Shield Bar

I.E.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
FIRE & GAS ALARM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 003

REV. 01

File Name : 1724000448-EL-DG-00015 Rev. 01

F.to UNI A3: 420mmx297mm

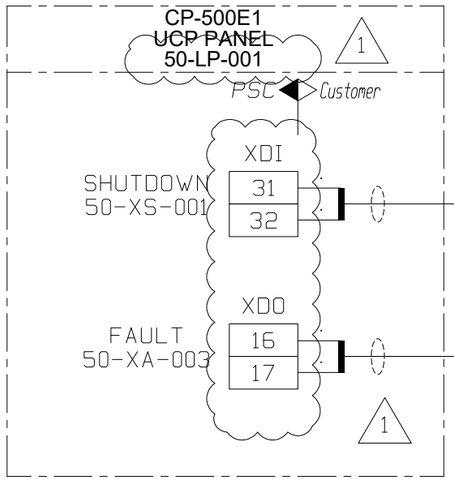
FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

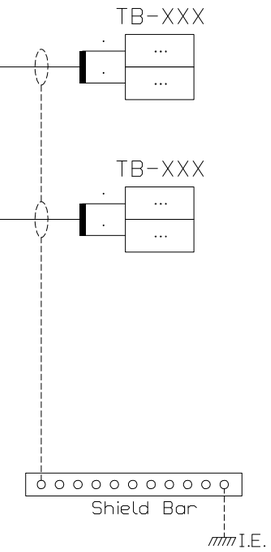
I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET
B400-SIS-001



50-XS-001/B400-SIS-001
2x2,5mmq
(By Others)

50-XA-003/B400-SIS-001
1x2x0,75mmq
(By Others)



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
SHUTDOWN/FAULT ALARM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 004

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 01

FIELD - PACKAGE A-50003

INSIDE CONTAINER

OUTSIDE CONTAINER

MCC PANEL
CP-500E1

400/230Vac
POWER SUPPLY

XINC
1
2
3
4
PE

50001-CEL-L1
1x70mmq

50001-CEL-L2
1x70mmq

50001-CEL-L3
1x70mmq

50001-CEL-N
1x70mmq

50001-CEL-PE
1x70mmq

1

JUNCTION BOX
JB-500E8

PSC ◆ Customer

TB-1
L1
L2
L3
N
PE

83016-CEL
5G70mmq
(By Others)

B-200 CONTAINER LV ROOM

SG-200N1
CLA3/+08 COLUMN CUBICLE

1

TB-XXX

230Vac
UPS
POWER SUPPLY

XINC
5
6
PE

1

50002-CEL-LN
3G2,5mmq
(By Others)

JUNCTION BOX
JB-500F8

PSC ◆ Customer

TB-1
L
N
PE

84313-CEL
3G2,5mmq
(By Others)

B-300 CONTAINER UPS ROOM

DP-200F3
AC DISTRIBUTION BOARD-PAS Q14

1

TB-XXX

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
400/230V POWER SUPPLY

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 005

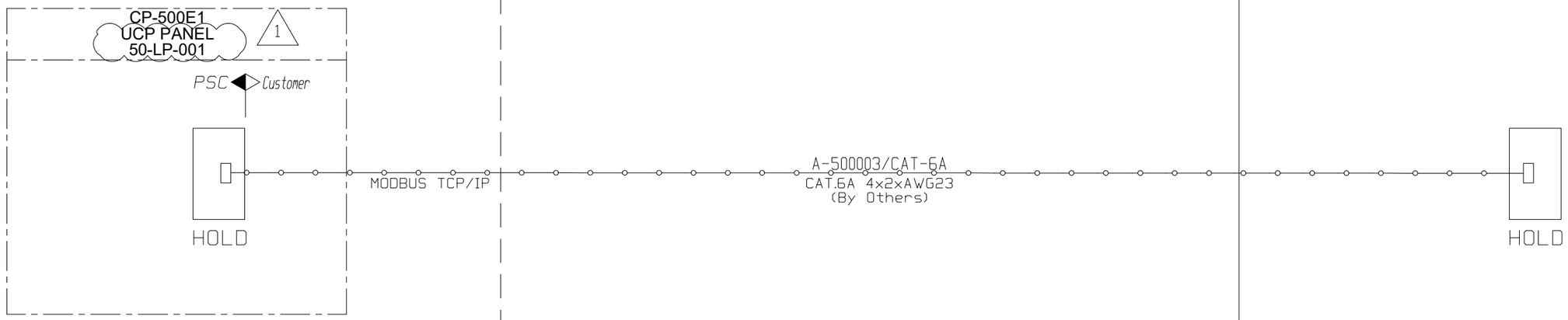
REV. 01

File Name : 1724000448-EL-DG-00015 Rev. 01

F.to UNI A3: 420mmx297mm

FIELD - PACKAGE A-50003 | I&T EQUIPMENT ROOM (ITER)

INSIDE CONTAINER | OUTSIDE CONTAINER | ICSS SYSTEM



PSC

DOC. REF: PK2885-I-001

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17/07/24	PSC	AZ	RM	REVISED AFTER CLIENT COMMENTS
00	14/05/24	PSC	AZ	RM	ISSUE FOR REVIEW (IFR)

TITLE : BASE LOAD POWER HUB (BLPH)
A-50003 PACKAGE INTERCONNECTING DIAGRAM
CONTROL SYSTEM

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

SCALE : 1:X

A3

DRAWING NO. 1724000448-EL-DG-00015

SHEET 006

REV. 01

F.to UNI A3: 420mmx297mm

File Name : 1724000448-EL-DG-00015 Rev. 01

CABLE N°	CABLE				CABLE EXTREMITIES				LENGHT (m)	SUPPLIED BY	REMARKS	REV.
	CABLE SIZE (mm)	TYPE	OUTER SHEATH	SERVICE	FROM	CABLE ENTRY	TO	CABLE ENTRY				
PD-50-AT-023/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater conductivity to P-50003A/B	50-AT-023	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-AT-024/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water conductivity from A-50007A	50-AT-024	M20x1,5	50-LP-001	-	11	PSC		1
C-50-AT-026/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet total hardness	50-AT-026	M20x1,5	50-LP-001	-	15	PSC		1
PD-50-AT-026/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet total hardness	50-AT-026	M20x1,5	50-LP-001	-	15	PSC		1
PD-50-AT-027/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet pH	50-AT-027	M20x1,5	50-LP-001	-	15	PSC		1
PD-50-FT-020/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater flow from H-50001	50-FT-020	M20x1,5	50-LP-001	-	16	PSC		1
PD-50-FT-022/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater flow from P-50003A	50-FT-022	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-FT-023/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater flow from P-50003B	50-FT-023	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-FT-024/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water flow from A-50007A	50-FT-024	M20x1,5	50-LP-001	-	12	PSC		1
PD-50-FT-026/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water flow from S-50010	50-FT-026	M20x1,5	50-LP-001	-	15	PSC		1
C-50-LT-020/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	T-50006 level	50-LT-020	M20x1,5	50-LP-001	-	17	PSC		1
C-50-LT-021/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	T-50008 level	50-LT-021	M20x1,5	50-LP-001	-	17	PSC		1
C-50-LT-022/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	T-50002 level	50-LT-022	M20x1,5	50-LP-001	-	12	PSC		1
C-50-LT-023/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	T-50003 level	50-LT-023	M20x1,5	50-LP-001	-	12	PSC		1
C-50-LT-024/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	T-50004 level	50-LT-024	M20x1,5	50-LP-001	-	12	PSC		1
C-50-PT-020/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater inlet pressure	50-PT-020	M20x1,5	50-LP-001	-	12	PSC		1
C-50-PDT-023/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	dP across S-50001	50-PDT-023	M20x1,5	50-LP-001	-	11	PSC		1
C-50-PT-025/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure from P-50003A	50-PT-025	M20x1,5	50-LP-001	-	17	PSC		1
C-50-PT-026/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure to P-50004A	50-PT-026	M20x1,5	50-LP-001	-	14	PSC		1
C-50-PT-027/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure from P-50003B	50-PT-027	M20x1,5	50-LP-001	-	17	PSC		1
C-50-PT-028/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure to P-50004B	50-PT-028	M20x1,5	50-LP-001	-	14	PSC		1
C-50-PT-030/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure from P-50004A	50-PT-030	M20x1,5	50-LP-001	-	12	PSC		1
C-50-PT-032/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Filtered seawater pressure from P-50004B	50-PT-032	M20x1,5	50-LP-001	-	12	PSC		1
C-50-PT-041/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet pressure	50-PT-041	M20x1,5	50-LP-001	-	15	PSC		1
C-50-PT-047/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water pressure from P-50009A/B	50-PT-047	M20x1,5	50-LP-001	-	15	PSC		1
C-50-TE-020/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	H-50001 temperature	50-TE-020	M20x1,5	50-LP-001	-	11	PSC		1
C-50-TT-021/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater temperature from H-50001	50-TT-021	M20x1,5	50-LP-001	-	11	PSC		1
C-50-TT-022/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater temperature from H-50001	50-TT-022	M20x1,5	50-LP-001	-	11	PSC		1
C-50-TT-023/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Ambient air temperature inside container	50-TT-023	M20x1,5	50-LP-001	-	15	PSC		1
C-50-TT-024/50-LP-001	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet temperature	50-TT-024	M20x1,5	50-LP-001	-	15	PSC		1
PD-50-XV-020/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater inlet - open/close Command	50-XV-020	M20x1,5	50-LP-001	-	12	PSC		1
C-50-XV-020/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Seawater inlet - opened/closed Limit switches	50-XV-020	M20x1,5	50-LP-001	-	12	PSC		1
PD-50-XV-021/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003A suction - open/close Command	50-XV-021	M20x1,5	50-LP-001	-	17	PSC		1
C-50-XV-021/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003A suction - opened/closed Limit switches	50-XV-021	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-XV-022/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003B suction - open/close Command	50-XV-022	M20x1,5	50-LP-001	-	17	PSC		1
C-50-XV-022/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003B suction - opened/closed Limit switches	50-XV-022	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-XV-023/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003A flushing - open/close Command	50-XV-023	M20x1,5	50-LP-001	-	17	PSC		1
C-50-XV-023/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003A flushing - opened/closed Limit switches	50-XV-023	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-XV-024/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003B flushing - open/close Command	50-XV-024	M20x1,5	50-LP-001	-	17	PSC		1
C-50-XV-024/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	P-50003B flushing - opened/closed Limit switches	50-XV-024	M20x1,5	50-LP-001	-	17	PSC		1
PD-50-XV-025/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water from A-50007A - open/close Command	50-XV-025	M20x1,5	50-LP-001	-	11	PSC		1
C-50-XV-025/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water from A-50007A - opened/closed Limit switches	50-XV-025	M20x1,5	50-LP-001	-	11	PSC		1
PD-50-XV-026/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water drain from A-50007A - open/close Command	50-XV-026	M20x1,5	50-LP-001	-	11	PSC		1
C-50-XV-026/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water drain from A-50007A - opened/closed Limit switches	50-XV-026	M20x1,5	50-LP-001	-	11	PSC		1
PD-50-XV-027/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Brine from A-50007A - open/close Command	50-XV-027	M20x1,5	50-LP-001	-	12	PSC		1
C-50-XV-027/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Brine from A-50007A - opened/closed Limit switches	50-XV-027	M20x1,5	50-LP-001	-	12	PSC		1
PD-50-XV-030/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Brine from A-50007B - open/close Command	50-XV-030	M20x1,5	50-LP-001	-	12	PSC		1
C-50-XV-030/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Brine from A-50007B - opened/closed Limit switches	50-XV-030	M20x1,5	50-LP-001	-	12	PSC		1
PD-50-XV-031/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet S-50004 - open/close Command	50-XV-031	M20x1,5	50-LP-001	-	15	PSC		1
C-50-XV-031/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water outlet S-50004 - opened/closed Limit switches	50-XV-031	M20x1,5	50-LP-001	-	15	PSC		1
PD-50-XV-032/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water off spec outlet S-50004 - open/close Command	50-XV-032	M20x1,5	50-LP-001	-	15	PSC		1
C-50-XV-032/50-LP-001	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Fresh water off spec outlet S-50004 - opened/closed Limit switches	50-XV-032	M20x1,5	50-LP-001	-	15	PSC		1
C-50-HS-020/50-LP-001	3G2,5	XLPE/LSZH-0,6/1kV	Black	Container Emergency Push Button	50-HS-020	M20x1,5	50-LP-001	-	15	PSC		1
C-P-50005A/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Soda Dosing Pumps - status	P-50005A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50005A/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Soda Dosing Pumps - start/stop + ctrl	P-50005A	M20x1,5	50-LP-001	-	11	PSC		1

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CABLE N°	CABLE				CABLE EXTREMITIES				LENGHT (m)	SUPPLIED BY	REMARKS	REV.
	CABLE SIZE (mm)	TYPE	OUTER SHEATH	SERVICE	FROM	CABLE ENTRY	TO	CABLE ENTRY				
C-P-50005B/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Soda Dosing Pumps - status	P-50005B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50005B/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Soda Dosing Pumps - start/stop + ctrl	P-50005B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50006A/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Antiscalant Dosing Pumps - status	P-50006A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50006A/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Antiscalant Dosing Pumps - start/stop	P-50006A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50006B/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Antiscalant Dosing Pumps - status	P-50006B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50006B/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Antiscalant Dosing Pumps - start/stop	P-50006B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50007A/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Container Inlet - status	P-50007A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50007A/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Container Inlet - start/stop	P-50007A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50007B/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Container Inlet - status	P-50007B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50007B/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Container Inlet - start/stop	P-50007B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50008A/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Seawater Intake - status	P-50008A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50008A/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Seawater Intake - start/stop	P-50008A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50008B/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Seawater Intake - status	P-50008B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50008B/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Seawater Intake - start/stop	P-50008B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50010A/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Wastewater Tank - status	P-50010A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50010A/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Wastewater Tank - start/stop	P-50010A	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50010B/50-LP-001_1	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Wastewater Tank - status	P-50010B	M20x1,5	50-LP-001	-	11	PSC		1
C-P-50010B/50-LP-001_2	2x2x1 Sh	XLPE/LSZH-300/500V	Grey	Biocide Dosing Pumps to Wastewater Tank - start/stop	P-50010B	M20x1,5	50-LP-001	-	11	PSC		1
C-LP-S-50010/50-LP-001_1	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	UV Sterilizer S-50010 - alarm	LP-S-50010	M20x1,5	50-LP-001	-	15	PSC		1
C-LP-S-50010/50-LP-001_2	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	UV Sterilizer S-50010 - command	LP-S-50010	M20x1,5	50-LP-001	-	15	PSC		1
C-LP-A-50003/50-LP-001_1	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Local Panel Coarse Filter A-50003 - alarm	LP-A-50003	M20x1,5	50-LP-001	-	12	PSC		1
C-LP-A-50003/50-LP-001_2	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Local Panel Coarse Filter A-50003 - command	LP-A-50003	M20x1,5	50-LP-001	-	12	PSC		1
C-LP-S-50001/50-LP-001_1	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Local Panel Sand filter S-50001 - alarm	LP-S-50001	M20x1,5	50-LP-001	-	11	PSC		1
C-LP-S-50001/50-LP-001_2	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Local Panel Sand filter S-50001 - command	LP-S-50001	M20x1,5	50-LP-001	-	11	PSC		1
C-LP-S-50004/50-LP-001_1	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Softening Filter - alarm	LP-S-50004	M20x1,5	50-LP-001	-	15	PSC		1
C-LP-S-50004/50-LP-001_2	1x2x1 Sh	XLPE/LSZH-300/500V	Grey	Softening Filter - command	LP-S-50004	M20x1,5	50-LP-001	-	15	PSC		1

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UNIT	VARIABLE	LOOP	TAG NUMBER	SERVICE	INSTRUMENT TYPE DESCRIPTION	LOC	INSTRUMENT RANGE (MIN/MAX)	CALIBRATION RANGE (MIN/MAX)	INSTRUMENT ALARM				SET	ENGINEERING UNITS	ELECTRICAL EXECUTION	MANUFACTURER	MODEL	P&ID REFERENCE	REV	NOTE
									LL	L	H	HH								
50	A	020	50-AT-020A	H2 GAS DETECTION IN CONTAINER	H2 GAS DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	SENSATION – SMART 3G	1724000448-PR-PID-00013 / 003	02	PRE-ALARM 5% LFL ALARM 10% LFL
50	A	020	50-AT-020B	H2 GAS DETECTION IN CONTAINER	H2 GAS DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	SENSATION – SMART 3G	1724000448-PR-PID-00013 / 003	02	PRE-ALARM 5% LFL ALARM 10% LFL
50	A	020	50-AT-020C	H2 GAS DETECTION IN CONTAINER	H2 GAS DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	SENSATION – SMART 3G	1724000448-PR-PID-00013 / 003	02	PRE-ALARM 5% LFL ALARM 10% LFL
50	A	021	50-AT-021A	FIRE DETECTION IN CONTAINER	FLAME / FIRE DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	HOCHIKI - SOC-E-IS	1724000448-PR-PID-00013 / 003	02	
50	A	021	50-AT-021B	FIRE DETECTION IN CONTAINER	FLAME / FIRE DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	HOCHIKI - SOC-E-IS	1724000448-PR-PID-00013 / 003	02	
50	A	021	50-AT-021C	FIRE DETECTION IN CONTAINER	FLAME / FIRE DETECTOR	F&G	\	\	\	\	\	\	\	\	SAFE AREA	SIA	HOCHIKI - SOC-E-IS	1724000448-PR-PID-00013 / 003	02	
50	A	023	50-AT-023	FILTERED SEAWATER CONDUCTIVITY TO P-50003A/B	ANALYZER TRANSMITTER - CONDUCTIVITY	Field	100 … 2000000	0 … 80000	\	\	63000	\	\	uS/cm	SAFE AREA	BURKERT	8228	1724000448-PR-PID-00013 / 003	02	
50	A	024	50-AT-024	FRESH WATER CONDUCTIVITY FROM A-50007A	ANALYZER TRANSMITTER - CONDUCTIVITY	Field	0.05 … 10000	0 … 1000	\	\	670	750	\	uS/cm	SAFE AREA	BURKERT	8222	1724000448-PR-PID-00013 / 004	02	
50	A	026	50-AT-026	FRESH WATER OUTLET TOTAL HARDNESS	ANALYZER TRANSMITTER - TOTAL HARDNESS	Field	1.6 … 16	1.6 … 16	\	\	8	9	\	ppm CaCO3	SAFE AREA	BURKERT	DUROMAT IQ	1724000448-PR-PID-00013 / 005	02	
50	A	027	50-AT-027	FRESH WATER OUTLET PH	ANALYZER TRANSMITTER - PH	Field	0 … 14	0 … 14	6.9	7.1	7.8	8	7.5	pH	SAFE AREA	BURKERT	8202+8203	1724000448-PR-PID-00013 / 005	02	
50	F	020	50-FT-020	SEAWATER FLOW FROM H-50001	MAGNETIC FLOW TRASMITTER	Field	0 … 50	0 … 8	\	2 / 4(*)	3 /6(*)	\	\	m³/h	SAFE AREA	BURKERT	8045	1724000448-PR-PID-00013 / 002	02	
50	F	022	50-FT-022	FILTERED SEAWATER FLOW FROM P-50003A	MAGNETIC FLOW TRASMITTER	Field	0 … 20	0 … 4	\	1.5	2.5	\	\	m³/h	SAFE AREA	BURKERT	8045	1724000448-PR-PID-00013 / 003	02	
50	F	023	50-FT-023	FILTERED SEAWATER FLOW FROM P-50003B	MAGNETIC FLOW TRASMITTER	Field	0 … 20	0 … 4	\	1.5	2.5	\	\	m³/h	SAFE AREA	BURKERT	8045	1724000448-PR-PID-00013 / 003	02	
50	F	024	50-FT-024	FRESH WATER FLOW FROM A-50007A	MAGNETIC FLOW TRASMITTER	Field	0 … 6	0 … 2	\	0.5	\	\	\	m³/h	SAFE AREA	BURKERT	8045	1724000448-PR-PID-00013 / 004	02	
50	F	026	50-FT-026	FRESH WATER FLOW FROM S-50010	MAGNETIC FLOW TRASMITTER	Field	0 … 6	0 … 2	\	0.5	1	\	\	m³/h	SAFE AREA	BURKERT	8045	1724000448-PR-PID-00013 / 005	02	
50	H	020	50-HS-020	CONTAINER EMERGENCY PUSH BUTTON	MANUAL ALARM FOR EMERGENCY	Field	\	\	\	\	\	\	\	\	SAFE AREA	STAHL	130679	1724000448-PR-PID-00013 / 003	02	
50	H	A50003	50-HS-A50003	SEA WATER COARSE FILTER A-50003	START/STOP SELECTOR	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	H	HFA50001	50-HS-HFA50001	CONTAINER AIR FAN HFA-50001	START/STOP SELECTOR	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	H	S50001	50-HS-S50001	SAND FILTER S-50001	START/STOP SELECTOR	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	H	S50004	50-HS-S50004	SOFTENING FILTER S-50004	START/STOP SELECTOR	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	H	S50010	50-HS-S50010	UV STERILIZER S-50010	START/STOP SELECTOR	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	L	020	50-LT-020	T-50006 LEVEL	LEVEL TRANSMITTER (GENERIC)	Field	0 … 100	0 … 100	10	20	90	\	\	%	SAFE AREA	BURKERT	8177	1724000448-PR-PID-00013 / 002	02	
50	L	021	50-LT-021	T-50008 LEVEL	LEVEL TRANSMITTER (GENERIC)	Field	0 … 100	0 … 100	10	20	90	\	\	%	SAFE AREA	BURKERT	8177	1724000448-PR-PID-00013 / 005	02	
50	L	022	50-LT-022	T-50002 LEVEL	LEVEL TRANSMITTER (GENERIC)	Field	0 … 100	0 … 100	10	20	\	\	\	%	SAFE AREA	BURKERT	8177	1724000448-PR-PID-00013 / 006	02	
50	L	023	50-LT-023	T-50003 LEVEL	LEVEL TRANSMITTER (GENERIC)	Field	0 … 100	0 … 100	10	20	\	\	\	%	SAFE AREA	BURKERT	8177	1724000448-PR-PID-00013 / 006	02	
50	L	024	50-LT-024	T-50004 LEVEL	LEVEL TRANSMITTER (GENERIC)	Field	0 … 100	0 … 100	10	20	\	\	\	%	SAFE AREA	BURKERT	8177	1724000448-PR-PID-00013 / 007	02	
50	P	024	50-PDI-024	DIFF PRESSURE ACROSS S-50002A / S-50003A	DIFFERENTIAL PRESSURE INDICATOR (SYSTEM)	UCP	\	0 … 2.5	\	\	2	\	\	barg	\	\	\	1724000448-PR-PID-00013 / 003	02	
50	P	029	50-PDI-029	DIFF PRESSURE ACROSS S-50002B / S-50003B	DIFFERENTIAL PRESSURE INDICATOR (SYSTEM)	UCP	\	0 … 2.5	\	\	2	\	\	barg	\	\	\	1724000448-PR-PID-00013 / 003	02	
50	P	049	50-PDI-049	DIFF PRESSURE ACROSS S-50004 / S-50010	DIFFERENTIAL PRESSURE INDICATOR (SYSTEM)	UCP	\	0 … 1	\	\	0.5	\	\	barg	\	\	\	1724000448-PR-PID-00013 / 005	02	
50	P	050	50-PDI-052	DIFF PRESSURE ACROSS S-50001	DIFFERENTIAL PRESSURE INDICATOR (SYSTEM)	UCP	\	0 … 1.5	\	\	1	\	\	barg	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	P	022	50-PI-022	SEAWATER PRESSURE TO S-50001	PRESSURE GAUGE	Field	0 … 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 002	02	
50	P	031	50-PI-031	BRINE PRESSURE FROM A-50007A	PRESSURE GAUGE	Field	0 … 100	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS40	1724000448-PR-PID-00013 / 004	02	
50	P	033	50-PI-033	BRINE PRESSURE FROM A-50007B	PRESSURE GAUGE	Field	0 … 100	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS40	1724000448-PR-PID-00013 / 004	02	
50	P	042	50-PI-042	SULPHURIC ACID PRESSURE FROM P-50005A/B	PRESSURE GAUGE	Field	0 … 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 006	02	
50	P	043	50-PI-043	ANTISCALANT PRESSURE FROM P-50006A/B	PRESSURE GAUGE	Field	0 … 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 006	02	
50	P	044	50-PI-044	BIOCIDE PRESSURE FROM P-50007A/B	PRESSURE GAUGE	Field	0 … 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 007	02	
50	P	045	50-PI-045	BIOCIDE PRESSURE FROM P-50008A/B	PRESSURE GAUGE	Field	0 … 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 007	02	

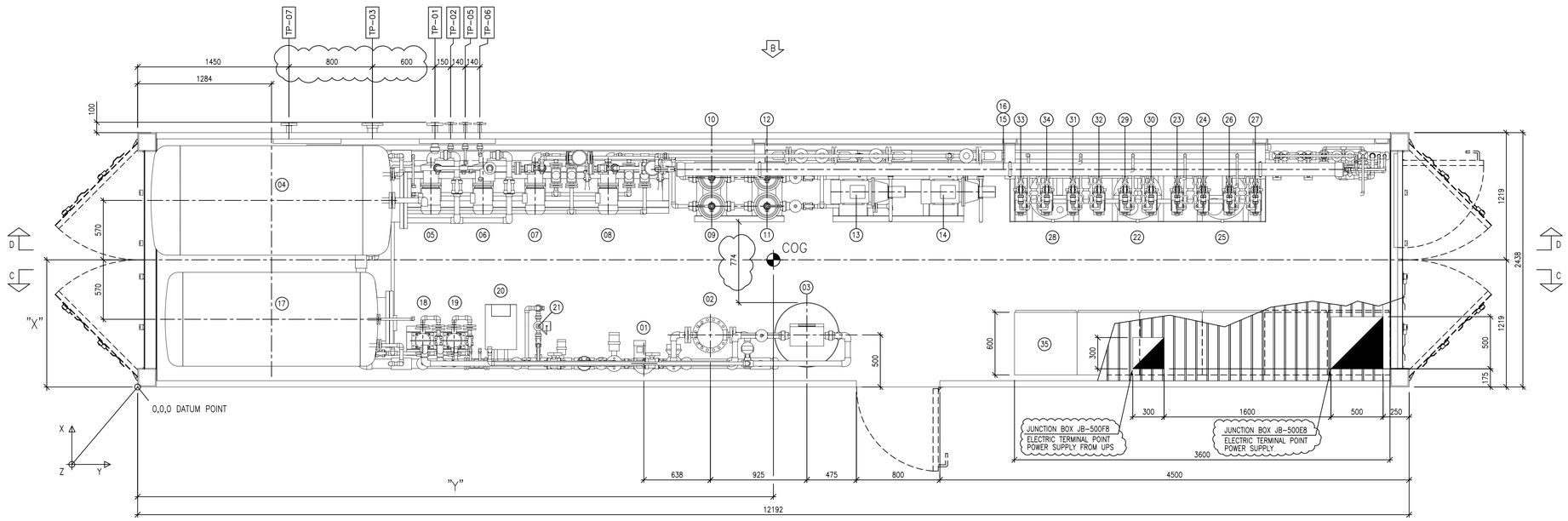
UNIT	VARIABLE	LOOP	TAG NUMBER	SERVICE	INSTRUMENT TYPE DESCRIPTION	LOC	INSTRUMENT RANGE (MIN/MAX)	CALIBRATION RANGE (MIN/MAX)	INSTRUMENT ALARM				SET	ENGINEERING UNITS	ELECTRICAL EXECUTION	MANUFACTURER	MODEL	P&ID REFERENCE	REV	NOTE
									LL	L	H	HH								
50	P	046	50-PI-046	BIOCIDE PRESSURE FROM P-50010A/B	PRESSURE GAUGE	Field	0 ... 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 007	02	
50	P	048	50-PI-048	SEAWATER PRESSURE OUTLET A-50003	PRESSURE GAUGE	Field	0 ... 6	\	\	\	\	\	\	barg	SAFE AREA	NUOVA FIMA	MGS20	1724000448-PR-PID-00013 / 002	02	
50	P	034	50-PSV-034	P-50004A SUCTION SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	4	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-14BL57-128	1724000448-PR-PID-00013 / 004	02	
50	P	035	50-PSV-035	A-50007A INLET SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	65	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-10AL0C-134	1724000448-PR-PID-00013 / 004	02	
50	P	036	50-PSV-036	A-50007A OUTLET SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	6	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-10AL2E-128	1724000448-PR-PID-00013 / 004	02	
50	P	037	50-PSV-037	P-50004B SUCTION SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	4	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-14BL57-128	1724000448-PR-PID-00013 / 004	02	
50	P	038	50-PSV-038	A-50007B INLET SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	65	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-10AL0C-134	1724000448-PR-PID-00013 / 004	02	
50	P	039	50-PSV-039	A-50007B OUTLET SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	6	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-10AL2E-128	1724000448-PR-PID-00013 / 004	02	
50	P	053	50-PSV-053	A-50009A/B OUTLET SIDE PROTECTION	PRESSURE RELIEF VALVE	Field	\	6	\	\	\	\	\	barg	SAFE AREA	COI TECHNOLOGY	GLVC-10AL2E-128	1724000448-PR-PID-00013 / 006	02	
50	P	020	50-PT-020	SEAWATER INLET PRESSURE	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	4	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 002	02	
50	P	025	50-PT-025	FILTERED SEAWATER PRESSURE FROM P-50003A	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	3	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 003	02	
50	P	026	50-PT-026	FILTERED SEAWATER PRESSURE TO P-50004A	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	2.5	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 003	02	
50	P	027	50-PT-027	FILTERED SEAWATER PRESSURE FROM P-50003B	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	3	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 003	02	
50	P	028	50-PT-028	FILTERED SEAWATER PRESSURE TO P-50004B	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	2.5	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 003	02	
50	P	030	50-PT-030	FILTERED SEAWATER PRESSURE FROM P-50004A	PRESSURE TRANSMITTER	Field	0 ... 100	0 ... 70	\	55	65	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 004	02	
50	P	032	50-PT-032	FILTERED SEAWATER PRESSURE FROM P-50004B	PRESSURE TRANSMITTER	Field	0 ... 100	0 ... 70	\	55	65	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 004	02	
50	P	041	50-PT-041	FRESH WATER OUTLET PRESSURE	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 8	\	4	6	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 005	02	
50	P	047	50-PT-047	FRESH WATER PRESSURE FROM P-50009A/B	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 8	\	4	6	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 005	02	
50	P	050	50-PT-050	PRESSURE INLET S-50001	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	\	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 002	02	
50	P	051	50-PT-051	PRESSURE OUTLET S-50001	PRESSURE TRANSMITTER	Field	0 ... 17	0 ... 6	\	\	\	\	\	barg	SAFE AREA	GEORG FISCHER	2450+9900	1724000448-PR-PID-00013 / 002	02	
50	T	020	50-TE-020	H-50001 TEMPERATURE	THERMOCOUPLE (PT100)	Field	-80 ... 500	\	\	\	\	\	\	°C	SAFE AREA	LA TERMOTECNICA	HR AB21030005	1724000448-PR-PID-00013 / 002	02	
50	T	020	50-TSHH-020	H-50001 TEMPERATURE	RELAY UNIT	MCC	\	\	\	\	110	\	110	°C	SAFE AREA	EUROTHERM	32ENG	1724000448-PR-PID-00013 / 002	02	
50	T	021	50-TT-021	SEAWATER TEMPERATURE FROM H-50001	TEMPERATURE TRANSMITTER	Field	-10 ... 100	0 ... 50	\	\	\	\	\	°C	SAFE AREA	GEORG FISCHER	2350+9900	1724000448-PR-PID-00013 / 002	02	
50	T	021	50-TIC-021	SEAWATER TEMPERATURE FROM H-50001	INDICATION AND CONTROL (SYSTEM)	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	T	021	50-TZ-021	SEAWATER TEMPERATURE FROM H-50001	THYRISTOR	MCC	\	\	\	\	\	\	\	\	SAFE AREA	MASTERWATT	73U03000D000060	1724000448-PR-PID-00013 / 002	02	
50	T	022	50-TT-022	SEAWATER TEMPERATURE FROM H-50001	TEMPERATURE TRANSMITTER	Field	-10 ... 100	0 ... 50	\	10	35	40	\	°C	SAFE AREA	GEORG FISCHER	2350+9900	1724000448-PR-PID-00013 / 002	02	
50	T	023	50-TT-023	AMBIENT AIR TEMPERATURE INSIDE CONTAINER	TEMPERATURE TRANSMITTER	Field	-50 ,,, 150	0 ... 50	\	\	\	\	\	°C	SAFE AREA	E+H	TST434	1724000448-PR-PID-00013 / 002	02	
50	T	023	50-TIC-023	AMBIENT AIR TEMPERATURE INSIDE CONTAINER	INDICATION AND CONTROL (SYSTEM)	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	T	024	50-TT-024	FRESH WATER OUTLET TEMPERATURE	TEMPERATURE TRANSMITTER	Field	-10 ... 100	0 ... 50	\	\	\	\	\	°C	SAFE AREA	GEORG FISCHER	2350+9900	1724000448-PR-PID-00013 / 005	02	
50	T	024	50-TI-024	FRESH WATER OUTLET TEMPERATURE	INDICATION (SYSTEM)	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 005	02	
50	X	020	50-XA-020	CONTAINER ALARM	MANUAL ALARM FOR EMERGENCY	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	A50003	50-XA-A50003	SEA WATER COARSE FILTER A-50003	FAULT ALARM	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	S50001	50-XA-S50001	SAND FILTER S-50001	FAULT ALARM	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	S50004	50-XA-S50004	SOFTENING FILTER S-50004	FAULT ALARM	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	S50010	50-XA-S50010	UV STERILIZER S-50010	FAULT ALARM	UCP	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	001	50-XA-001	GAS CONFIRMED INSIDE CONTAINER	ALARM (SYSTEM)	FGS	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	002	50-XA-002	SMOKE CONFIRMED INSIDE CONTAINER	ALARM (SYSTEM)	FGS	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 003	02	

UNIT	VARIABLE	LOOP	TAG NUMBER	SERVICE	INSTRUMENT TYPE DESCRIPTION	LOC	INSTRUMENT RANGE (MIN/MAX)	CALIBRATION RANGE (MIN/MAX)	INSTRUMENT ALARM				SET	ENGINEERING UNITS	ELECTRICAL EXECUTION	MANUFACTURER	MODEL	P&ID REFERENCE	REV	NOTE
									LL	L	H	HH								
50	X	003	50-XA-003	F&G FAULT	ALARM (SYSTEM)	FGS	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	001	50-XS-001	CONTAINER SHUTDOWN	SHUTDOWN ALARM	SIS	\	\	\	\	\	\	\	\	\	\	\	1724000448-PR-PID-00013 / 003	02	SIGNAL FROM SIS SYSTEM
50	X	020	50-XV-020	SEAWATER INLET	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 002	02	
50	X	020	50-XY-020	MOV OPEN/CLOSE - SEAWATER INLET	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	020	50-XZSH-020	MOV OPENED - SEAWATER INLET	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	020	50-XZSL-020	MOV CLOSED - SEAWATER INLET	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	021	50-XV-021	P-50003A SUCTION	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 003	02	
50	X	021	50-XY-021	MOV OPEN/CLOSE - P-50003A SUCTION	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	021	50-XZSH-021	MOV OPENED - P-50003A SUCTION	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	021	50-XZSL-021	MOV CLOSED - P-50003A SUCTION	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	022	50-XV-022	P-50003B SUCTION	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 003	02	
50	X	022	50-XY-022	MOV OPEN/CLOSE - P-50003B SUCTION	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	022	50-XZSH-022	MOV OPENED - P-50003B SUCTION	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	022	50-XZSL-022	MOV CLOSED - P-50003B SUCTION	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	023	50-XV-023	P-50003A FLUSHING	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 003	02	
50	X	023	50-XY-023	MOV OPEN/CLOSE - P-50003A FLUSHING	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	023	50-XZSH-023	MOV OPENED - P-50003A FLUSHING	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	023	50-XZSL-023	MOV CLOSED - P-50003A FLUSHING	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	024	50-XV-024	P-50003B FLUSHING	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 003	02	
50	X	024	50-XY-024	MOV OPEN/CLOSE - P-50003B FLUSHING	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 003	02	
50	X	024	50-XZSH-024	MOV OPENED - P-50003B FLUSHING	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	024	50-XZSL-024	MOV CLOSED - P-50003B FLUSHING	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 003	02	
50	X	025	50-XV-025	FRESH WATER FROM A-50007A	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 004	02	
50	X	025	50-XY-025	MOV OPEN/CLOSE - FRESH WATER FROM A-50007A	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 004	02	
50	X	025	50-XZSH-025	MOV OPENED - FRESH WATER FROM A-50007A	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 004	02	
50	X	025	50-XZSL-025	MOV CLOSED - FRESH WATER FROM A-50007A	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 004	02	
50	X	026	50-XV-026	FRESH WATER DRAIN FROM A-50007A	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 004	02	
50	X	026	50-XY-026	MOV OPEN/CLOSE - FRESH WATER DRAIN FROM A-50007A	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 004	02	
50	X	026	50-XZSH-026	MOV OPENED - FRESH WATER DRAIN FROM A-50007A	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 004	02	
50	X	026	50-XZSL-026	MOV CLOSED - FRESH WATER DRAIN FROM A-50007A	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 004	02	
50	X	027	50-XV-027	BRINE FROM A-50007A	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	Z5732-00-001-KC	1724000448-PR-PID-00013 / 004	02	
50	X	027	50-XY-027	MOV OPEN/CLOSE - BRINE FROM A-50007A	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 004	02	
50	X	027	50-XZSH-027	MOV OPENED - BRINE FROM A-50007A	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	AOX-005	1724000448-PR-PID-00013 / 004	02	
50	X	027	50-XZSL-027	MOV CLOSED - BRINE FROM A-50007A	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	AOX-005	1724000448-PR-PID-00013 / 004	02	
50	X	030	50-XV-030	BRINE FROM A-50007B	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	Z5732-00-001-KC	1724000448-PR-PID-00013 / 004	02	
50	X	030	50-XY-030	MOV OPEN/CLOSE - BRINE FROM A-50007B	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 004	02	
50	X	030	50-XZSH-030	MOV OPENED - BRINE FROM A-50007B	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	AOX-005	1724000448-PR-PID-00013 / 004	02	

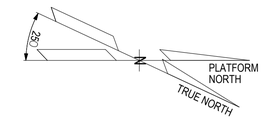
UNIT	VARIABLE	LOOP	TAG NUMBER	SERVICE	INSTRUMENT TYPE DESCRIPTION	LOC	INSTRUMENT RANGE (MIN/MAX)	CALIBRATION RANGE (MIN/MAX)	INSTRUMENT ALARM				SET	ENGINEERING UNITS	ELECTRICAL EXECUTION	MANUFACTURER	MODEL	P&ID REFERENCE	REV	NOTE
									LL	L	H	HH								
50	X	030	50-XZSL-030	MOV CLOSED - BRINE FROM A-50007B	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	TRUST VALVES	AOX-005	1724000448-PR-PID-00013 / 004	02	
50	X	031	50-XV-031	FRESH WATER OUTLET S-50004	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 005	02	
50	X	031	50-XY-031	MOV OPEN/CLOSE - FRESH WATER OUTLET S-50004	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 005	02	
50	X	031	50-XZSH-031	MOV OPENED - FRESH WATER OUTLET S-50004	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
50	X	031	50-XZSL-031	MOV CLOSED - FRESH WATER OUTLET S-50004	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
50	X	032	50-XV-032	FRESH WATER OFF SPEC OUTLET S-50004	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 005	02	
50	X	032	50-XY-032	MOV OPEN/CLOSE - FRESH WATER OFF SPEC OUTLET S-50004	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 005	02	
50	X	032	50-XZSH-032	MOV OPENED - FRESH WATER OFF SPEC OUTLET S-50004	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
50	X	032	50-XZSL-032	MOV CLOSED - FRESH WATER OFF SPEC OUTLET S-50004	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
50	X	033	50-XV-033	H-50001 SEAWATER DRAIN	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 002	02	
50	X	033	50-XY-033	MOV OPEN/CLOSE - H-50001 SEAWATER DRAIN	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	033	50-XZSH-033	MOV OPENED - H-50001 SEAWATER DRAIN	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	033	50-XZSL-033	MOV CLOSED - H-50001 SEAWATER DRAIN	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	034	50-XV-034	T-50006 SEAWATER DRAIN	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 002	02	
50	X	034	50-XY-034	MOV OPEN/CLOSE - T-50006 SEAWATER DRAIN	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 002	02	
50	X	034	50-XZSH-034	MOV OPENED - T-50006 SEAWATER DRAIN	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	034	50-XZSL-034	MOV CLOSED - T-50006 SEAWATER DRAIN	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 002	02	
50	X	035	50-XV-035	T-50008 FRESH WATER DRAIN	MOTOR OPERATED VALVE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	546 PRO	1724000448-PR-PID-00013 / 005	02	
50	X	035	50-XY-035	MOV OPEN/CLOSE - T-50008 FRESH WATER DRAIN	MOV COMMAND	UCP	\	\	\	\	\	\	\	\	SAFE AREA	\	\	1724000448-PR-PID-00013 / 005	02	
50	X	035	50-XZSH-035	MOV OPENED - T-50008 FRESH WATER DRAIN	LIMIT SWITCH OPEN	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
50	X	035	50-XZSL-035	MOV CLOSED - T-50008 FRESH WATER DRAIN	LIMIT SWITCH CLOSE	Field	\	\	\	\	\	\	\	\	SAFE AREA	GEORG FISCHER	EA15	1724000448-PR-PID-00013 / 005	02	
950	MF	05201	950-MFA-05201	FIRE MANUAL PUSH BUTTON	MANUAL ALARM FOR EMERGENCY	Field	\	\	\	\	\	\	\	\	SAFE AREA	SIA	E2S – BExCP3-BG	1724000448-PR-PID-00013 / 003	02	SIGNAL TO B400-FGS-002
950	X	05201	950-XL-05201	CONTAINER AMBER LAMP SIGNAL	ALARM/STATUS AMBER LAMP	Field	\	\	\	\	\	\	\	\	SAFE AREA	SIA	E2S - D1xB2X05	1724000448-PR-PID-00013 / 003	02	SIGNAL FROM B400-FGS-002
950	X	05202	950-XL-05202	CONTAINER RED LAMP SIGNAL	ALARM/STATUS RED LAMP	Field	\	\	\	\	\	\	\	\	SAFE AREA	SIA	E2S - D1xB2X05	1724000448-PR-PID-00013 / 003	02	SIGNAL FROM B400-FGS-002
950	X	05201	950-XZ-05201	CONTAINER ACOUSTIC SIGNAL	ALARM/STATUS SOUNDER	Field	\	\	\	\	\	\	\	\	SAFE AREA	SIA	E2S – D1xS1F	1724000448-PR-PID-00013 / 003	02	SIGNAL FROM B400-FGS-002

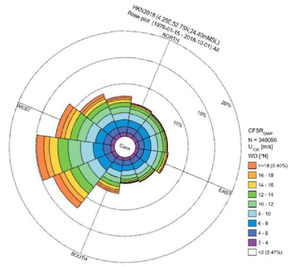
DRAWING NO. 1724000448-MAC-DA-00005

REV. 2



PLAN





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
2. NO EXTERNAL NOZZLE LOADS IS ASSUMED.

TERMINAL POINT

TP No.	NPS	RATING	FACE	MAT.	DESCRIPTION
TP-01	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER FROM INTAKE PUMPS
TP-02	1"	L.J. FLG. ASME B16.5 150#	RF	PVC	PRODUCT WATER
TP-03	3"	L.J. FLG. ASME B16.5 150#	RF	PVC	SEA WATER DRAIN
TP-05	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO SEA WATER INTAKE
TP-06	1"	L.J. FLG. ASME B16.5 150#	RF	PP	BIOCIDE TO WASTE WATER TANK
TP-07	1.1/2"	L.J. FLG. ASME B16.5 150#	RF	PVC	CHEMICAL DRAIN

C.O.G.

DESCRIPTION	"X" mm	"Y" mm	"Z" mm
LIFTING CONDITION	1034	7076	1293
OPERATING CONDITION	1185	4540	1322

⊛ CONTAINER TOTAL WEIGHT Kg

DESCRIPTION	
LIFTING CONDITION	10500
OPERATING CONDITION	15675

⊛ INCLUDED STEEL SUPPORT FOR EQUIPEMENT/PIPE/ELECTR. PARTS

EQUIPMENT LIST

REF.	ITEM	DESCRIPTION	WEIGHT (empty) Kg	WEIGHT (full) Kg
01	A50003	SEA WATER COARSE FILTER	7	20
02	H50001	ELECTRIC HEATER	155	180
03	S50001	SEA WATER SAND FILTER	250	300
04	T50006	FILTERED WATER TANK	300	3300
05	P50002A	BACKWASH PUMP	20	25
06	P50002B	BACKWASH PUMP	20	25
07	P50003A	SW BOOSTER PUMP	20	25
08	P50003B	SW BOOSTER PUMP	20	25
09	S50002A	SW 1ST. CARTRIDGE FILTER	18	35
10	S50002B	SW 1ST. CARTRIDGE FILTER	18	35
11	S50003A	SW 2ND. CARTRIDGE FILTER	18	35
12	S50003B	SW 2ND. CARTRIDGE FILTER	18	35
13	P50004A	HIGHT PRESSURE PUMP	50	55
14	P50004B	HIGHT PRESSURE PUMP	50	55
15	A50007A	SEA WATER REVERSE OSMOSIS UNIT	60	120
16	A50007B	SEA WATER REVERSE OSMOSIS UNIT	60	120
17	T50008	FRESH WATER TANK	200	2200
18	P50009A	FRESH WATER PUMP	20	25
19	P50009B	FRESH WATER PUMP	20	25
20	S50004	SOFTENING FILTER	35	125
21	S50010	UV STERILIZER	15	50
22	T50002	CAUSTIC SODA DOSING TANK	20	80
23	P50005A	CAUSTIC SODA DOSING PUMP	2	3
24	P50005B	CAUSTIC SODA DOSING PUMP	2	3
25	T50003	ANTISCALANT DOSING TANK	20	80
26	P50006A	ANTISCALANT DOSING PUMP	2	3
27	P50006B	ANTISCALANT DOSING PUMP	2	3
28	T50004	NON-OXIDANT BIOCIDE DOSING TANK	30	130
29	P50007A	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
30	P50007B	NON-OXIDANT BIOCIDE DOSING PUMP-CONTAINER INLET	2	3
31	P50008A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
32	P50008B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP005	2	3
33	P50010A	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
34	P50010B	NON-OXIDANT BIOCIDE DOSING PUMP-B.L. TP006	2	3
35	–	PLC	1800	1800
			3264	8935

REF. DOCUMENTS

DOC. No.	DESCRIPTION
1724000448-PR-PID-00013	P&I DIAGRAM
1724000448-MAC-DS-00016	PACKAGE WEIGHT DATA SHEET

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

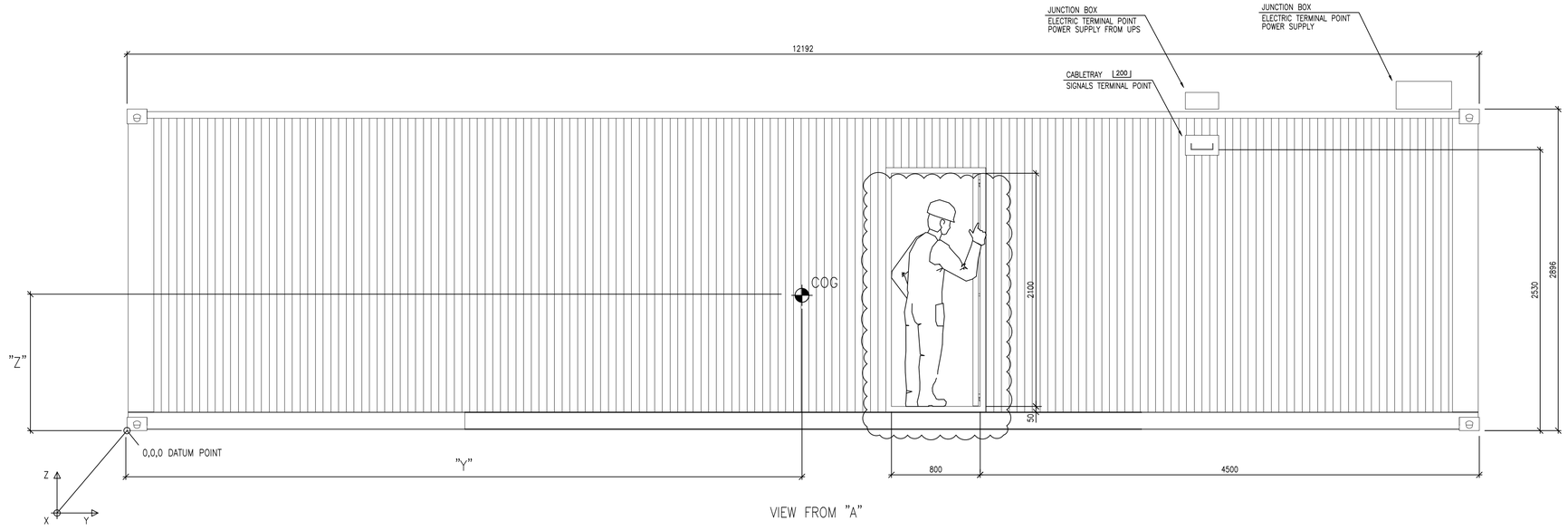
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND FOUNDATIONS LAODING CALCULATIONS-PLANS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 001	REV. 2

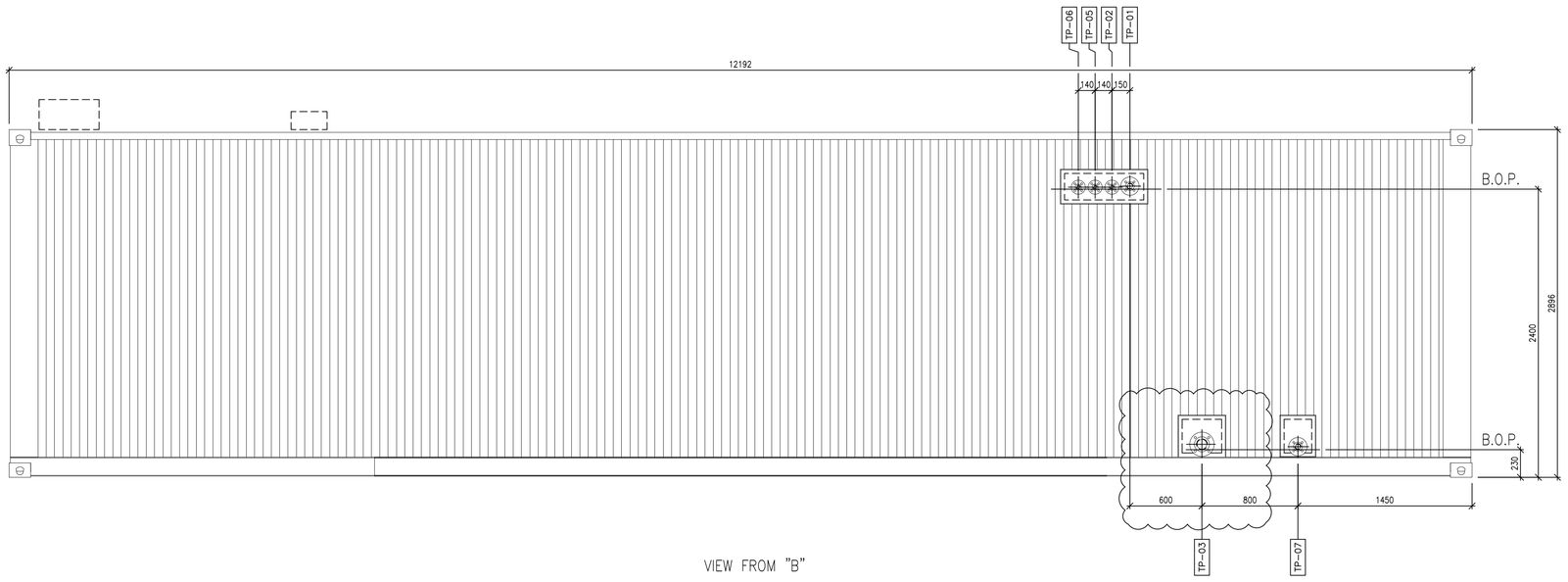
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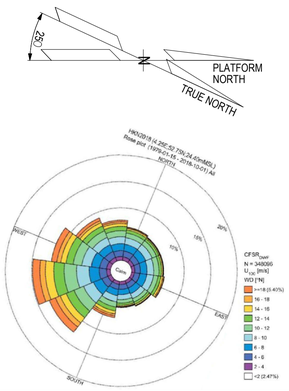
REV. 2



VIEW FROM "A"



VIEW FROM "B"



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC

DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

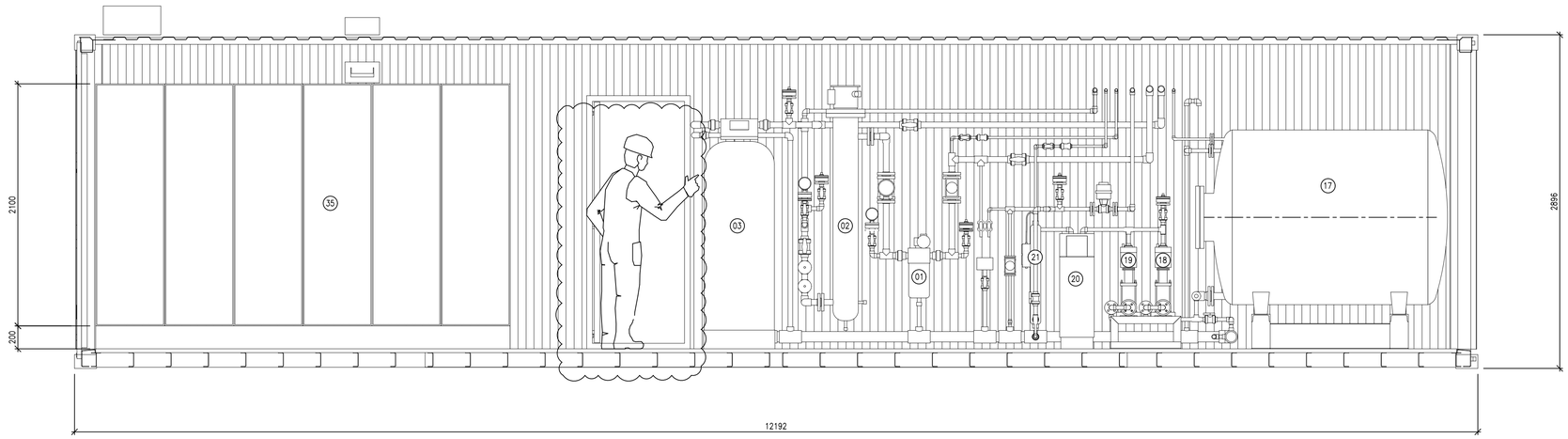
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND FOUNDATIONS LAODING CALCULATIONS-VIEWS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 002	REV. 2

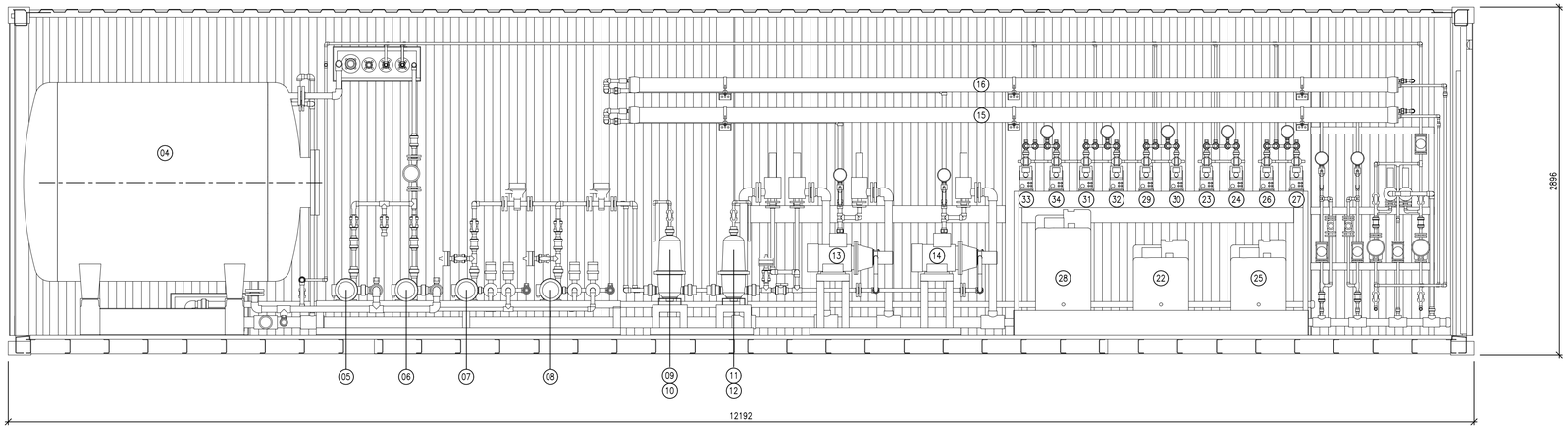
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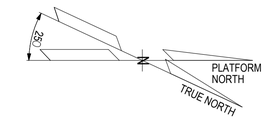
REV. 2

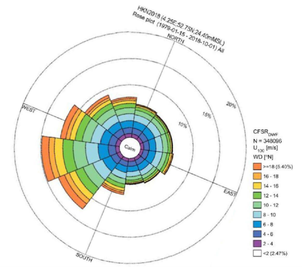


SECTION "C-C"



SECTION "D-D"





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-SECTIONS

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24
A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 003	REV. 2

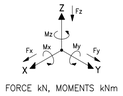
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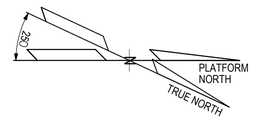
REV. 2

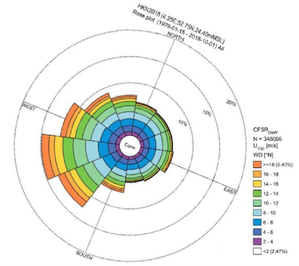


MAX. LOAD REACTION						
OPERATING CONDITION						
POINT	Fx	Fy	Fz	Mx	My	Mz
A1	19.5	9.1	49.0	118.4	27.3	118.4
A2	19.5	9.1	49.0	118.4	27.3	118.4
B1	19.5	9.1	49.0	118.4	27.3	118.4
B2	19.5	9.1	49.0	118.4	27.3	118.4
TRANSIT CONDITION						
A1	19.3	19.3	48.3	–	–	–
A2	19.3	19.3	48.3	–	–	–
B1	19.3	19.3	48.3	–	–	–
B2	19.3	19.3	48.3	–	–	–



FORCE kN, MOMENTS kNm





NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.

PSC

DOC. REF: PK2885-P-002

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	23-JUL-24	PSC	UR	RM	ISSUE FOR REVIEW
1	07-MAY-24	PSC	UR	RM	ISSUED FOR COMMENTS
0	10-APR-24	PSC	UR	RM	ISSUED FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :
WATER TREATMENT PACKAGE
GENERAL ARRANGEMENT DRAWINGS AND
FOUNDATIONS LAODING CALCULATIONS-FOUNDATION

CONTRACT NO./TITLE			SCALE 1:25
DRAWN PSC	CHECKED UR	APPROVED RM	DATE 10/04/24

A1	DRAWING NO. 1724000448-MAC-DA-00005	SHEET 004	REV. 2

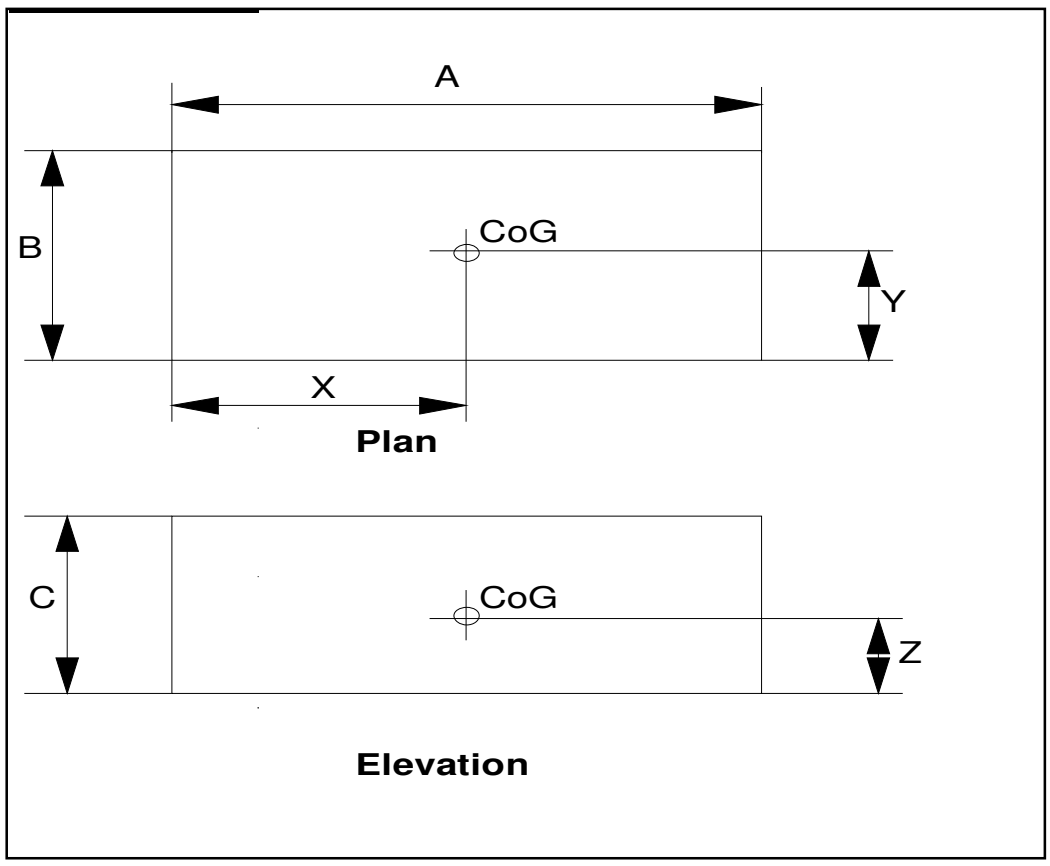
File Name : 1724000448-MAC-DA-00005 rev2

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	PACKAGE WEIGHT DATA SHEET	Sh. 4 of 4 Date 27/06/2024 Rev. 0

WEIGHT DATA (kg)

		Areas for input by Supplier	
Dry Weight	(I)	10500	**kg**
Content	(II)	Note (1)	**kg**
Operating Weight	(I+II)	15675	**kg**
Auxiliaries' weight, included in I (specify under Notes)		-	**kg**
Test weight, i.e. filled with water		15675	**kg**
Transport weight		10500	**kg**

CENTRE OF GRAVITY (CoG) DATA FOR INSTALLED DRY CONDITION



Overall dimensions		
A =	12192	**mm**
B =	2438	**mm**
C =	2896	**mm**

CoG location (mm)		
X =	7076	**mm**
Y =	1034	**mm**
Z =	1293	**mm**

NOTES

(1) Not applicable as the dry weight include the container and equipment

(2) CoG indication in lifting operation

WEIGHT AND CoG STATUS (TICK OFF AS APPROPRIATE)

■ Estimated	☐ Calculated
■ Catalogue data	☐ Weighed

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-50-XA-003/B400-SIS-001 : 50-LP-001/B400-SIS-001				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	50-10 : Water Desalination Package & Distribution				Module	LD/LD_B-400
TASK	code	C10004541		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 Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH | Cores/Size mm²: 1X2X0,75 mm2 | Color: ORANGE

From: 50-LP-001 | To: B400-SIS-001

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.	PL
8	Check cable and core marking are in accordance with specification.	PL
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	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	1,8	Ω
	SCREEN	1,8	Ω
	EARTH	NA	Ω
	ARMr	1,8	Ω
	TEST VOLTS	500	V

TEST ALL CORES AND RECORD LOWEST VALUE

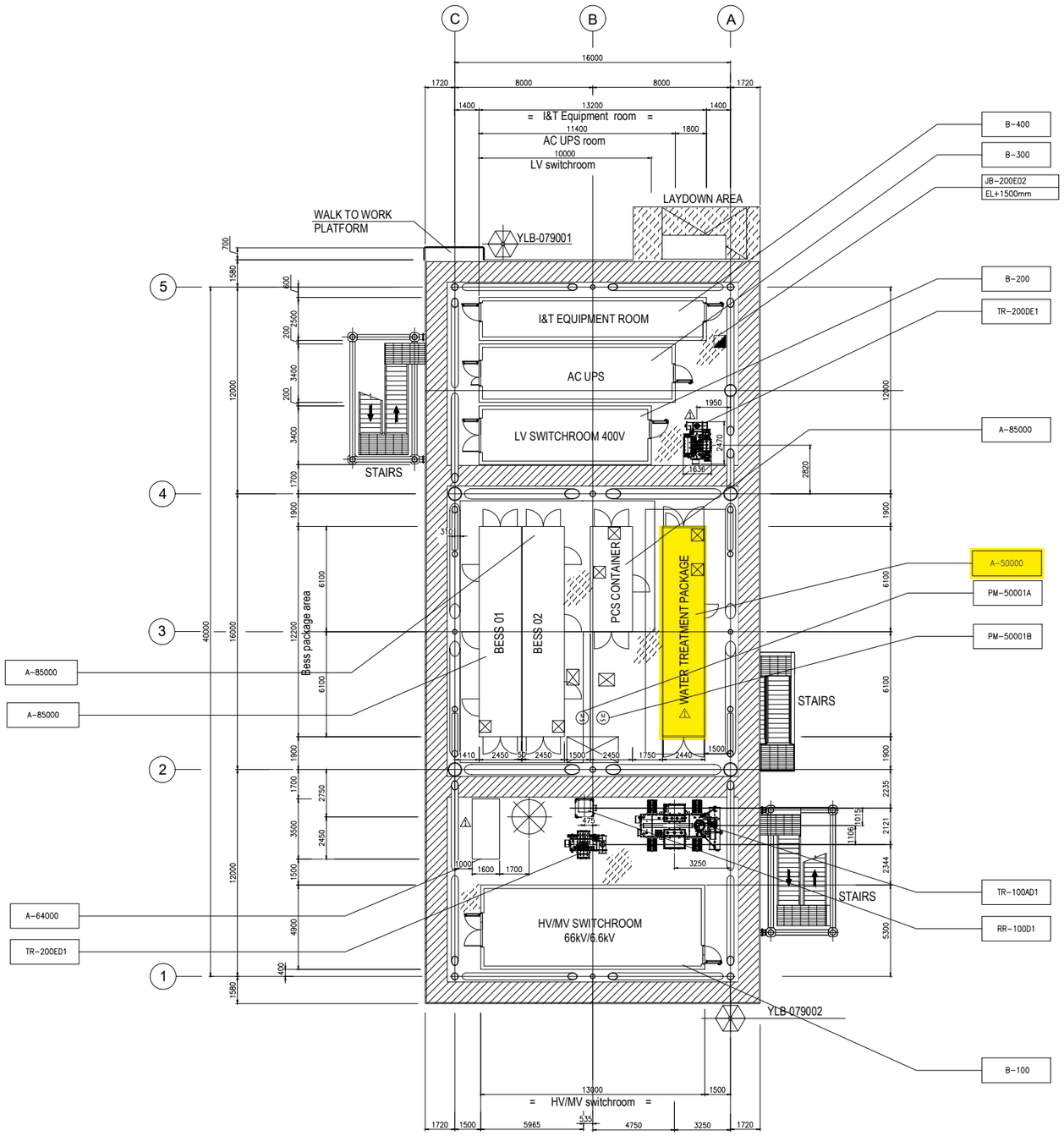
Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

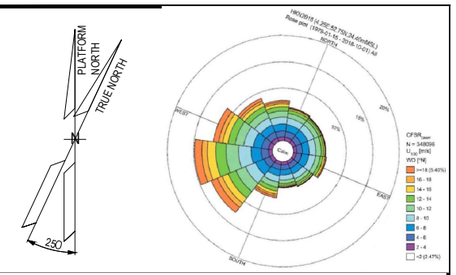
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 | Calibration date: N°7722/24 10/07/2024

Comments: Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Giovanni Tangianu	
Date	2024-11-26	2024-11-26	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-26T07:34:33.249Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-26T16:08:37.900Z	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

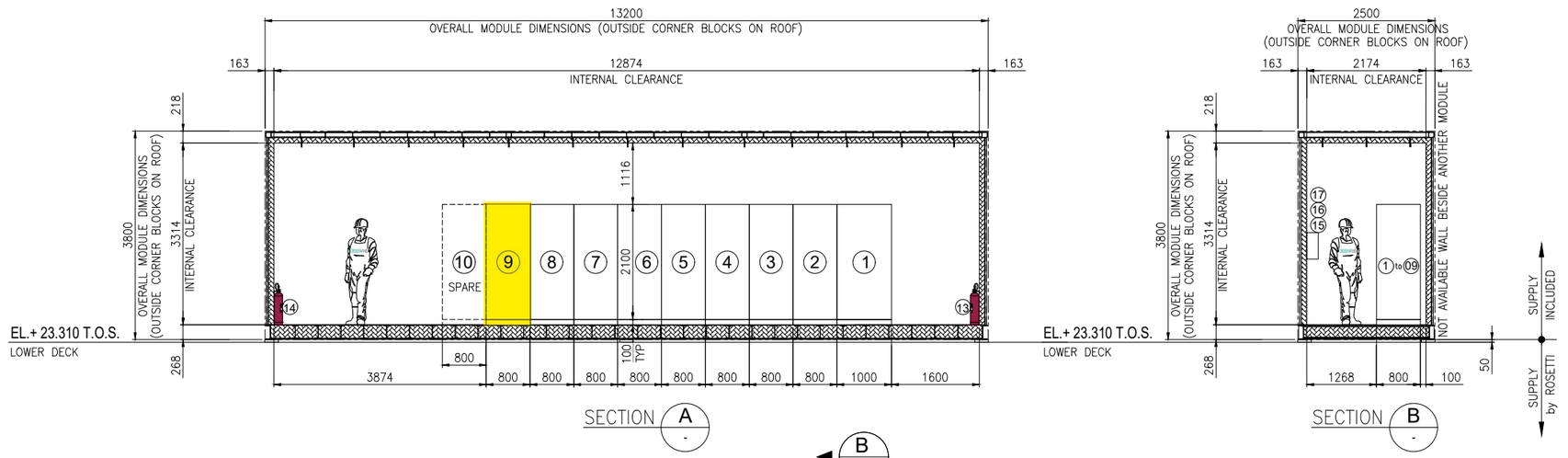
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SAM | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 04/03/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20101 | SHEET 001 | REV. 01

DRAWING NO. 123A90-DDL-EL-DL-20101 REV. 01

File Name : 123A90-DDL-EL-DL-20101-Electrical Equipment Layout – Lower Deck

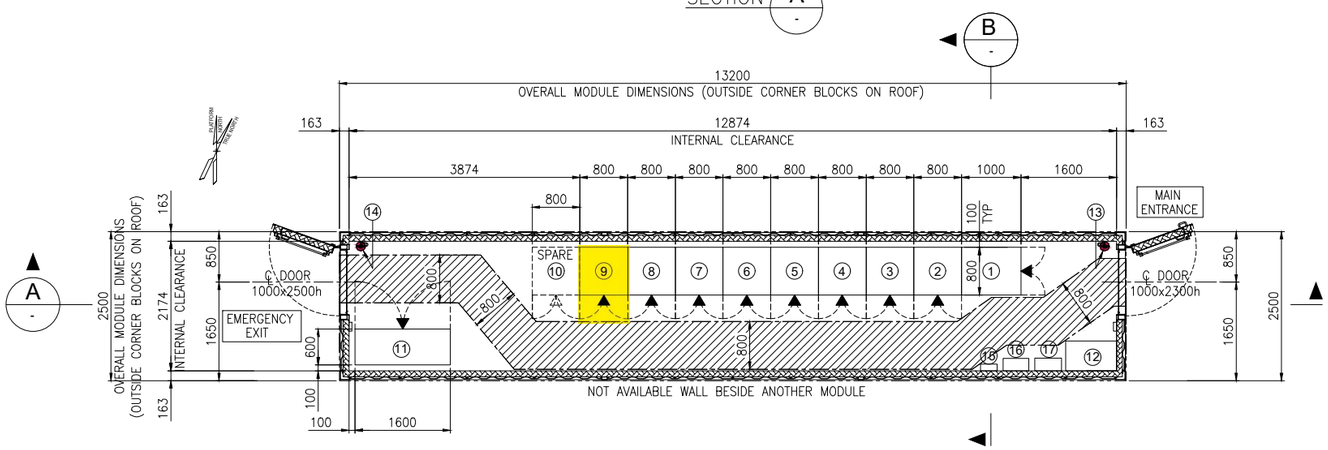
DRAWING NO. 123A90-DDL-IN-DL-40012

REV. 03



SECTION A -

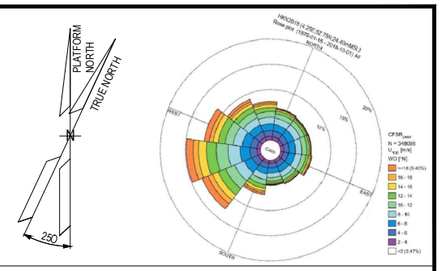
SECTION B -



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

EQUIPMENT LIST

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



NOTES

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

LEGEND

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

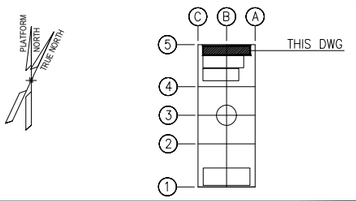
HOLDS

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REFERENCE

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

KEY PLAN



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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

FIELD

PACKAGE	CABLE NO	I&T EQUIPMENT ROOM (ITER) MARSHALLING CABINET B400-SIS-001
<01> A-85000 BESS UCP — 85-XA-003 — (NOTE 5) / (NOTE 5) / (NOTE 5) WH BK PR1 — NOTE-2	P320PLC/B400-SIS-001 2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS	TB-P30PLC PR1 WH BK 01 02 85-XA-003 Shield Bar
A-85000 BESS UCP — 85-XA-004 — (NOTE 5) / (NOTE 5) / (NOTE 5) WH BK PR2 — NOTE-2		TB-P30PLC PR2 WH BK 03 04 85-XA-004 Shield Bar
A-20000 ELECTROLYSER UCP — 20-XA-003 — (NOTE 5) / (NOTE 5) / (NOTE 5) WH BK — NOTE-2	C-20-XA-003/B400-SIS-001 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XA-000 WH BK 01 02 20-XA-003 Shield Bar
A-80000 FUEL CELL UCP — 80-XA-003 — (NOTE 5) / (NOTE 5) / (NOTE 5) WH BK — NOTE-2	C-80-XA-003/B400-SIS-001 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XA-000 WH BK 03 04 80-XA-003 Shield Bar
F&G PANEL 50-LP-002 — A-50003 Water Treatment Unit UCP — 50-XA-003 — TB-RLY 9 15 WH BK — NOTE-2	C-50-XA-003/B400-SIS-001 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XA-000 WH BK 05 06 50-XA-003 Shield Bar
A-63000 I. AIR PACKAGE UCP — 63-XA-003 — TB-XA 4 5 WH BK — NOTE-2	C-63-XA-003/B400-SIS-001 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XA-000 WH BK 07 08 63-XA-003 Shield Bar
A-64000 NITROGEN PACKAGE UCP — 64-XA-003 — TB-XA 4 5 WH BK — NOTE-2	C-64-XA-003/B400-SIS-001 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS	TB-XA-000 WH BK 09 10 64-XA-003 Shield Bar I.E.

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
PACKAGE UCP FAULT ALARM

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

A3	DRAWING NO. 123-A90-DDL-IN-DG-40015	SHEET 014	REV. 01

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

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

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. CONNECTION TERMINAL BLOCK SHALL BE DEFINED DURING CONSTRUCTION PHASE.

<01>

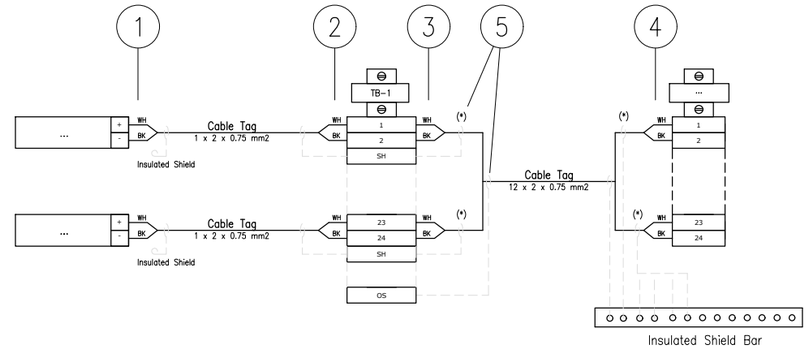
LEGENDS & SYMBOLS:

LEGEND:

I.E.	- GREEN ——— INSTRUMENT SIGNAL EARTH
P.E.	- GREEN/YELLOW —— P.E. EARTH/BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM <01>
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM <01>
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS <01>

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

PIPING AND INSTRUMENT DIAGRAM	123A90-DDL-PR-PID-80009
INSTRUMENT INDEX	123A90-DDL-IN-LIS-40088 Rev.01
F&G DETECTORS LAYOUT	123A90-DDL-SAF-DL-30027

CROSSWIND

ROSETTI MARINO

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

REV.:	DATE:	SIGNATURE:
1_K	18/11/24	G.Randi

ROSETTI MARINO SpA

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

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

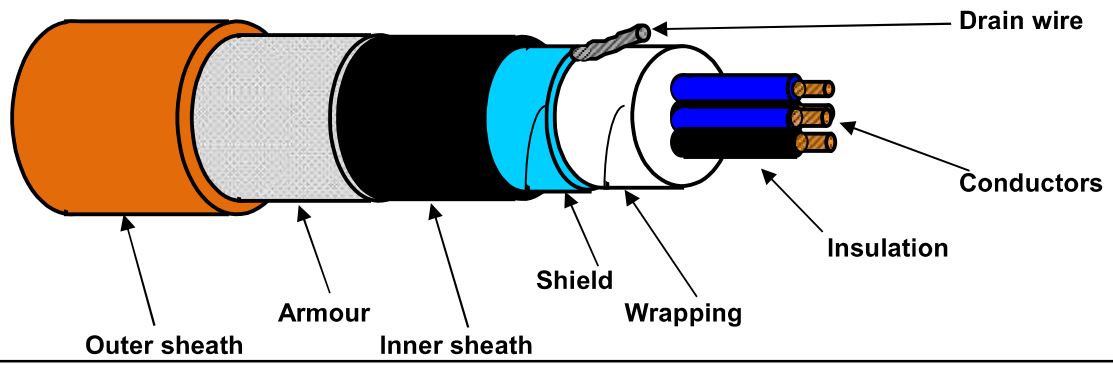
	DRAWING NO.	SHEET	REV.
A3	123A90-DDL-IN-DG-40016	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-50-XA-003/B400-SIS-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						50-LP-001	Communication	Lower Deck	B400-SIS-001	Marshalling SIS	Lower Deck (B-400)	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S_Double			n.a.				L-SEC-21 / L-SEC-18C / L-SEC-18B / I-MCT-403

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

1X2X0,75 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,5 mm	
Cores colour code :	**White - Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	10/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,1 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,2 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 1X2X0,75 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(8,5 ± 10%) mm	
Over armour diameter :	(9,3 ± 10%) mm	
Outer diameter :	(11,7 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Fire Resistant test :	**IEC 60331.21**	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

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

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

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC & discipline : M

Mechanical	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
A-50000	Water Treatment Package	ONSHORE	C10002351	CZX01M	100	2025-02-24	RFC 2

ITEM	Tag	A-50000	: Water Treatment Package			Dwg	123A90-DDL-PR-PID-80022
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10002351		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Mechanical Form CZX01M		Package - M

1	Check that the nameplate details and tag number are complete and correct.	PL
2	Check that the holding down arrangements are correct.	PL
3	Check for all interface piping/mechanical reinstated on site by contractor.	PL
4	Check that the package Mechanical equipment is complete and not damaged.	PL
5	Check all the equipment for correct lubrication, for oil leaks and cleanliness.	OK
6	Check for the free rotation of rotating equipment.	OK
7	Check the insulation, painting and for correct tagging and identification.	OK
8	Check that the earthing system of the equipment is as per specification.	PL
9	Check that the Package is fixed and tightened to the structures.	OK
10	Check the release note, FAT report and outstanding Punch list for the Package	OK
11	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-18	2025-02-24	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-18T12:48:09.941Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-24T16:37:43.467Z	

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC & discipline : T

Telecom	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-LP-001/B400-NET-001	COMMUNICATION / NETWORK CABINET	ONSHORE	C10004348	CIX09	100	2024-11-27	RFC 2

ITEM	Tag	50-LP-001/B400-NET-001	: COMMUNICATION / NETWORK CABINET		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD/LD_B-400	
TASK	code	C10004348	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Telecom	Form	CIX09	Telecom Cable RJ45

CABLE DATA

Type: FTP-LSZH-IS-OS-SWB-LSZH | Cores/Size mm²: 4X2X23AWG mm2 | Color: GREY

From: 50-LP-001 | To: B400-NET-001

1	Confirm cable is as specified in project cable schedule	OK
2	Check cable physical integrity.	OK
3	Check is installed in accordance with layout drawing (segregation, distance…).	OK
4	Check cable is supported and fixed to rack according to project specification.	Note
5	Check bending radius is within the specified limits.	OK
6	Confirm cable glands suit for cable type, correctly mounted and tightened.	OK
7	Confirm cable labelling is in accordance with specifications.	PL
8	Check cable is correctly loomed and segregated in accordance with specification.	OK
9	Check proper fitting of heat shrink sleeves and cable glands (if applicable).	PL
10	Check cores marking are in accordance with termination diagram.	OK
11	Check terminations are in accordance with latest termination diagram.	PL
12	To roll up that measured lenght complies with pulled lenght.	OK
13	To roll up the cable complies with Cat. 5E performance requirements (250 Mhz).	OK
14	Attach LAN tester print out to this test sheet.	OK
15	if required produce Red Line Mark Up for "AS BUILT"	

Comments: Nota 4: refer to PL C30000680

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Alessio Polo	
Date	2024-11-25	2024-11-27	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-11-25T11:03:51.507Z	PROVERLIS Digitaly signed by Alessio Polo 2024-11-27T12:21:48.861Z	

ROSETTI MARINO

Cable ID: 50-LP-001/B400-NET-001

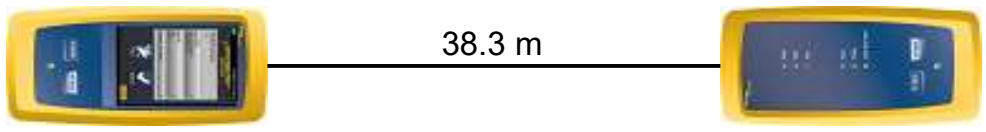
Test Limit: ISO11801 PL2 Class Ea
Limits Version: V7.6
Date / Time: 22-11-2024 15:59:24
Headroom 2.5 dB (NEXT 4,5-7,8)
Cable Type: Cat 6A S/FTP
NVP: 77.0%

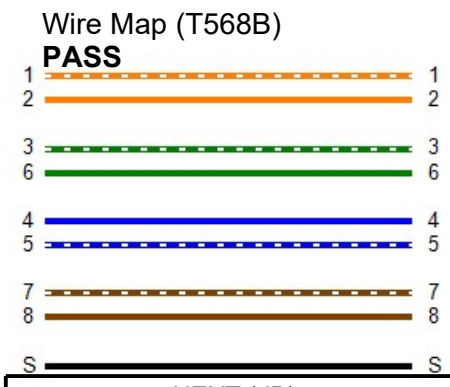
Main: Versiv
S/N: 2226344
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000 (DSX-PLA804)
S/N: 22340270

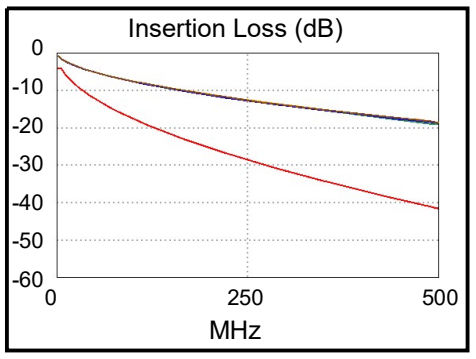
Test Summary: PASS

Remote: Versiv
S/N: 2226336
Software Version: V6.7 Build 1
Calibration Date: 12-12-2022
Adapter: DSX-8000R (DSX-PLA804)
S/N: 22340257

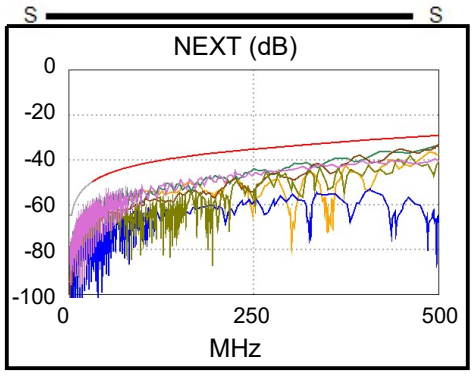
Length (m), Limit 90.0	[Pair 4,5]	38.3
Prop. Delay (ns), Limit 496	[Pair 1,2]	169
Delay Skew (ns), Limit 43	[Pair 1,2]	3
Resistance (ohms), Limit 20.60	[Pair 3,6]	5.41
Insertion Loss Margin (dB)	[Pair 3,6]	22.5
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	41.6

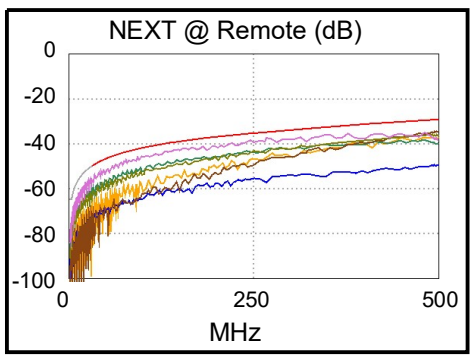




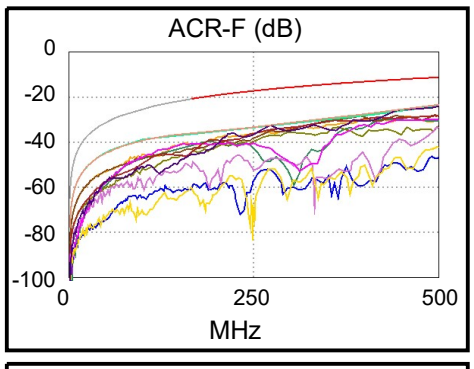


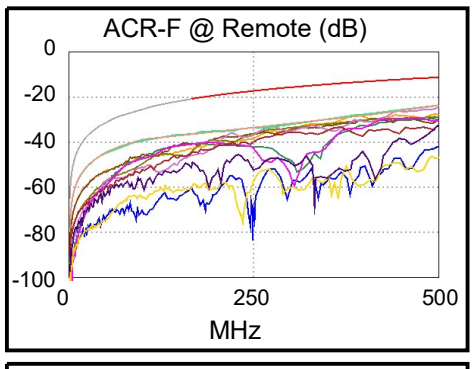
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	4,5-7,8	3,6-4,5	3,6-4,5
NEXT (dB)	4.0	2.5	4.0	5.1
Freq. (MHz)	500.0	270.0	500.0	500.0
Limit (dB)	29.2	34.8	29.2	29.2
Worst Pair	4,5	4,5	4,5	3,6
PS NEXT (dB)	3.6	3.6	3.6	4.6
Freq. (MHz)	500.0	270.0	500.0	500.0
Limit (dB)	26.4	32.1	26.4	26.4



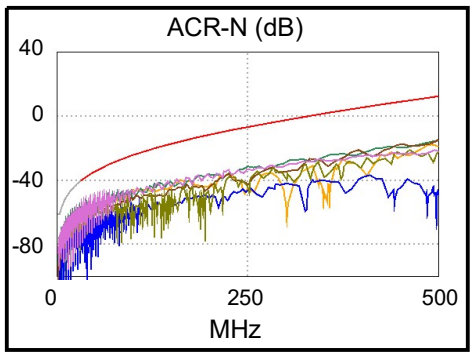


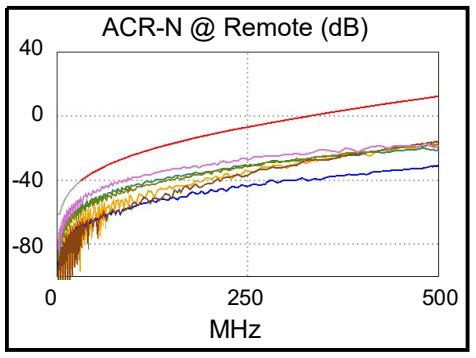
PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8-4,5	4,5-7,8	7,8-4,5	4,5-7,8
ACR-F (dB)	12.3	12.4	12.3	12.4
Freq. (MHz)	499.0	499.0	499.0	499.0
Limit (dB)	11.3	11.3	11.3	11.3
Worst Pair	3,6	7,8	3,6	7,8
PS ACR-F (dB)	13.6	12.8	13.6	12.8
Freq. (MHz)	500.0	500.0	500.0	500.0
Limit (dB)	8.3	8.3	8.3	8.3



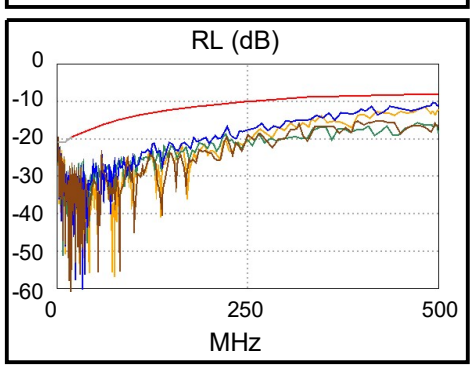


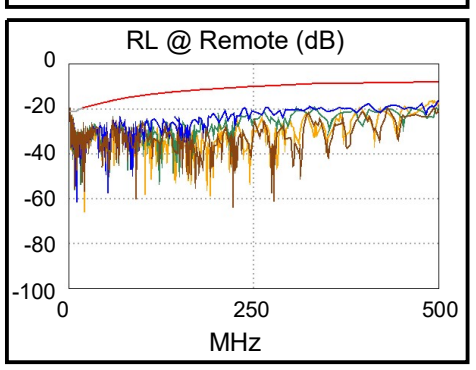
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	4,5-7,8	3,6-4,5	3,6-4,5
ACR-N (dB)	15.7	10.6	26.9	28.0
Freq. (MHz)	32.0	37.8	500.0	500.0
Limit (dB)	40.0	38.0	-12.4	-12.4
Worst Pair	4,5	4,5	4,5	3,6
PS ACR-N (dB)	17.0	12.3	26.6	27.2
Freq. (MHz)	32.5	37.8	500.0	500.0
Limit (dB)	37.4	35.6	-15.3	-15.3





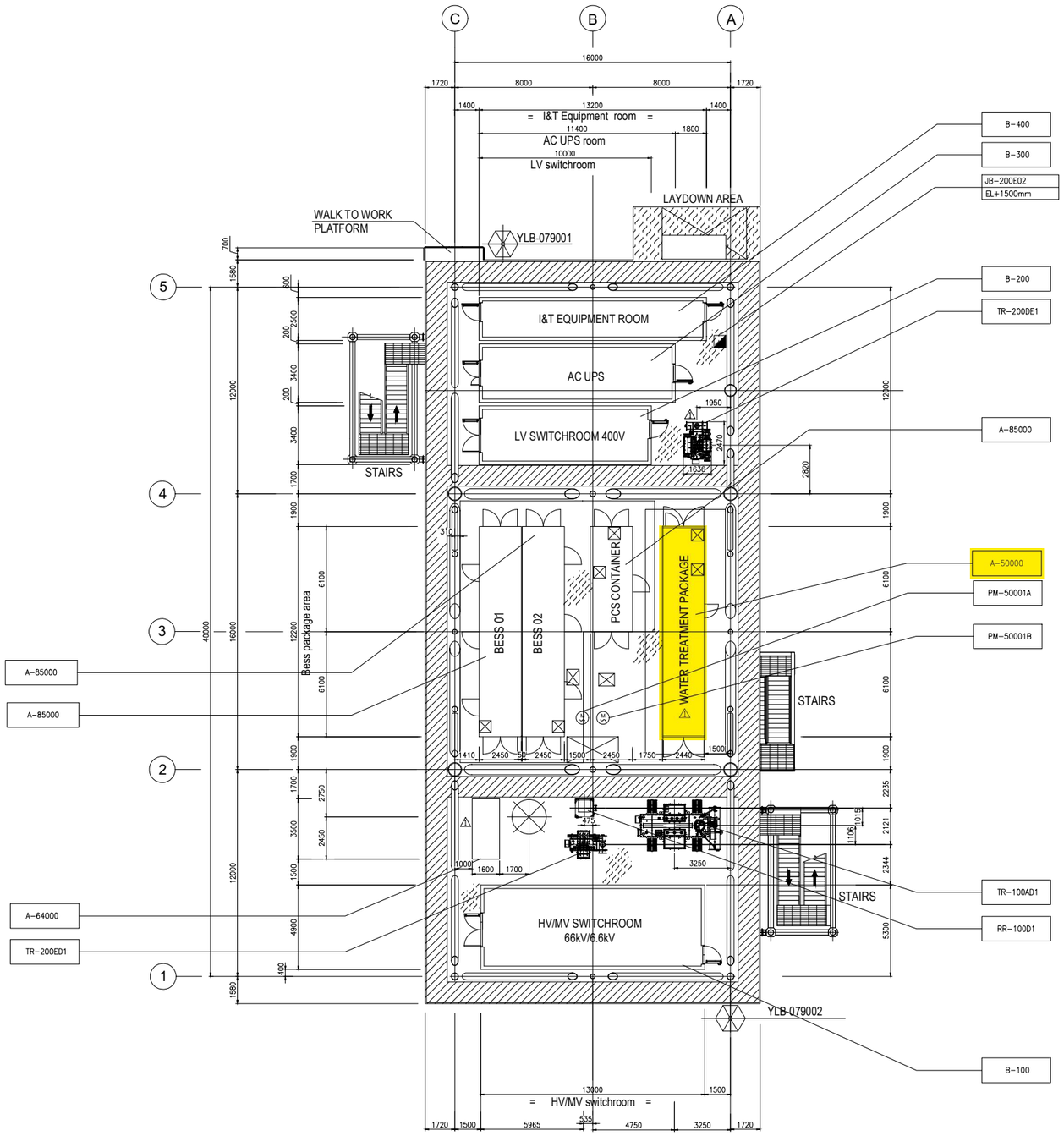
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	1,2	4,5	1,2
RL (dB)	2.3	8.0	2.3	8.0
Freq. (MHz)	494.0	488.0	494.0	488.0
Limit (dB)	8.0	8.0	8.0	8.0



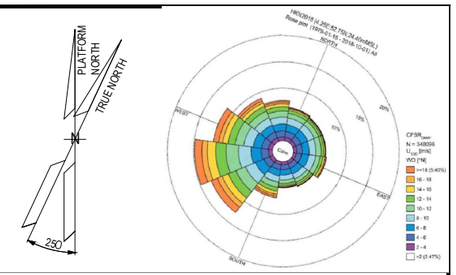


Compliant Network Standards:

10BASE-T	100BASE-TX	100BASE-T4
1000BASE-T	2.5GBASE-T	5GBASE-T
10GBASE-T	ATM-25	ATM-51
ATM-155	100VG-AnyLan	TR-4
TR-16 Active	TR-16 Passive	



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



NOTES

1. ALL DIMENSIONS IN MM UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS IN METERS. UNLESS NOTED OTHERWISE.
3. ELEVATIONS REFER TO T.O.S.
4. FOR ELECTRICAL EQUIPMENT LAYOUT OF CONTAINERS B-100, B-200, B-300, B-400 REFER TO THE RESPECTIVE LAYOUTS.

LEGEND

M	ELECTRIC MOTOR – LOW VOLTAGE
⊠	INTERFACE PANEL
◪	JUNCTION BOX
JB-200E2 / EL+500mm	TAG ITEM / REFERED ELEVATION TO T.O.S. (TOP OF STEEL)

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20106	ELECTRICAL EQUIPMENT LAYOUT UPSs & BATTERIES SWITCHROOM
⚠ 123A90-DDL-IN-DL-40012	ITER EQUIPMENT LAYOUT
123A90-DDL-EL-DL-20104	ELECTRICAL EQUIPMENT LAYOUT HV & MV SWITCHROOM
123A90-DDL-EL-DL-20105	LV SWITCHGEAR ROOM EQUIPMENT LAYOUT

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/05/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	04/03/24	SAM	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20101**
REV.: 1_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

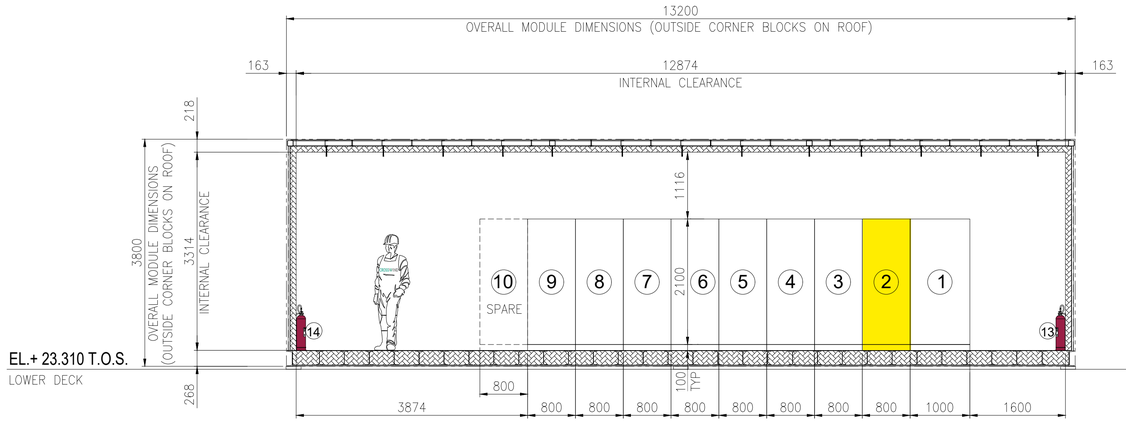
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LOWER DECK

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:150
DRAWN SAM | CHECKED FMA/AMA | APPROVED FPA/DLO | DATE 04/03/24
A1 | DRAWING NO. 123A90-DDL-EL-DL-20101 | SHEET 001 | REV. 01

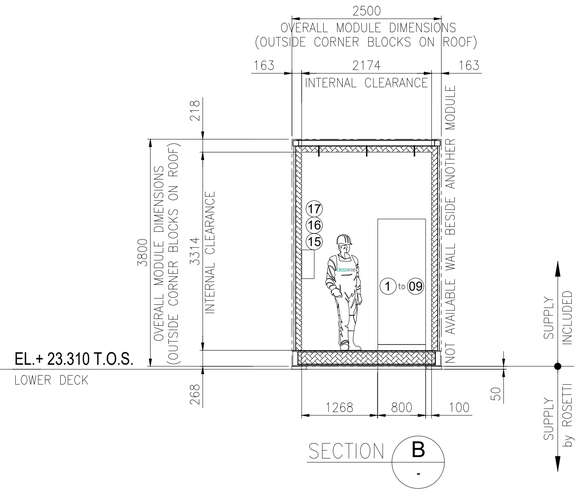
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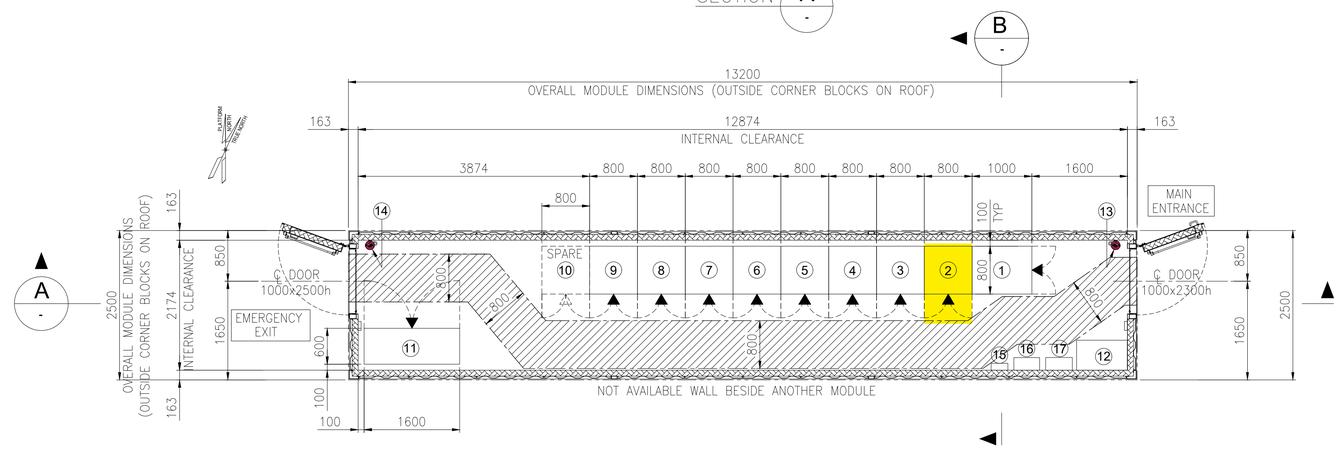
DRAWING NO. 123A90-DDL-IN-DL-40012 REV. 03



SECTION A -



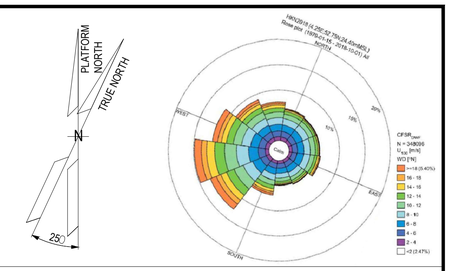
SECTION B -



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

EQUIPMENT LIST

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



NOTES

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

LEGEND

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

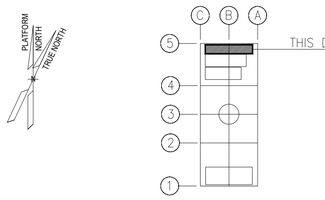
HOLDS

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REFERENCE

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

KEY PLAN



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

CROSSWIND | ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

FIELD				I&T EQUIPMENT ROOM (ITER B400)		
				NETWORK CABINET - B400-NET-001		
						<01>
CP-500E1 UCP PANEL	SEA WATER TREAT. (A-50003) 50-LP-001	ITEM: PORT: P3	RJ45	50-LP-001 / B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P16
	I. A. PACKAGE (A-63000) 63-LP-001	ITEM: NOTE 5 PORT: NOTE 5	RJ45	63-LP-001 / B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P17
	NITROGEN SYSTEM (U-64000) 64-LP-001	ITEM: NOTE 5 PORT: NOTE 5	RJ45	64-LP-001 / B400-NET-001 CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GR	RJ45	SWITCH: COOP-01 PORT: P18
	TRANSFORMER TR-100AD1 AVR	ITEM: TAPCON 230 - EXPERT PORT: SCADA ETHERNET	RJ45	TR-100AD1AVR/B400-NET-001 ~~TR-100AD1-AVR/ B400-EMGS-001~~ CAT.6A4x2xAWG23,Sh+ShT+ARM,F.Ret,GREEN,NIS	RJ45	SWITCH: COOP-01 PORT: P19

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
COMMUNICATION – CAT-6

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

A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 038	REV. 01

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

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

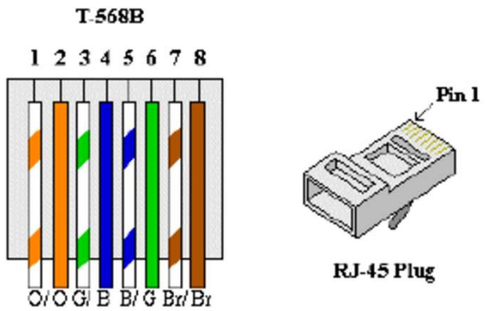
REV. 01

NOTES:

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

<01>

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



RJ-45 Plug

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

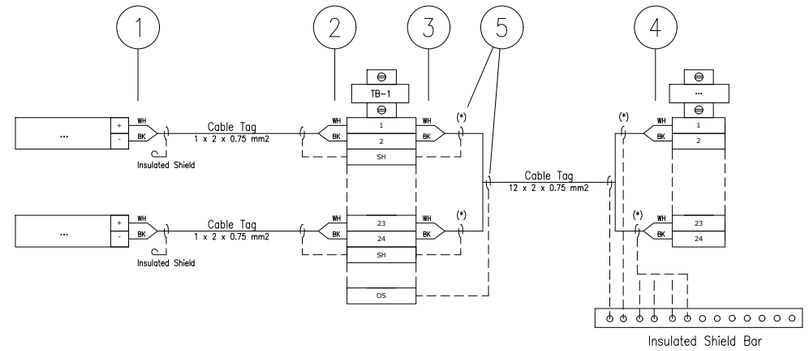
LEGENDS & SYMBOLS:

LEGEND:

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

TYPICAL WIRE CROSS-FERRULING:

PHILOSOPHY OF CROSS-FERRULING: <01>



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

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

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

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

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

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

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

REFERENCE DRAWINGS

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

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

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

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

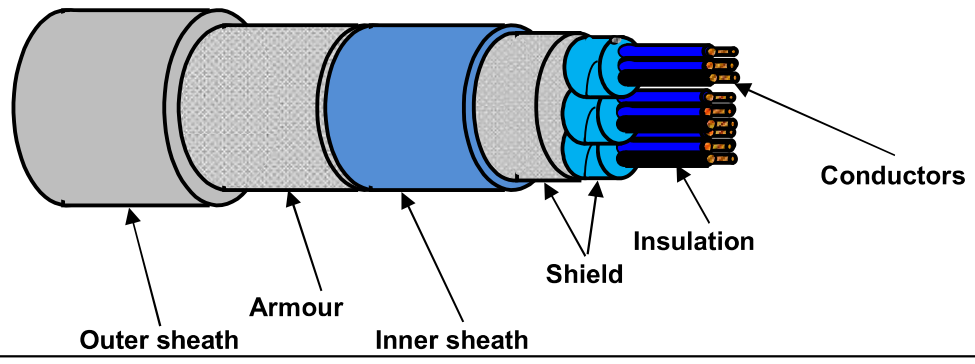
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
50-LP-001/B400-NET-001	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						50-LP-001	Communication	Lower Deck	B400-NET-001	Network Cabinet / EMCS System	Lower Deck (B-400)	TELCV03-4X2X23AWG	Cable CAT 6A S/FTP 4x2x23AWG Armoured LSZH - Grey	M20S	n.a.			n.a.				L-SEC-21 / L-SEC-18C / L-SEC-18B / L-SEC-18A / B-400-SEC-2A / B-400-SEC-2B / B-400-SEC-3B / I-MCT-402

FLEI s.r.l.

CAT. 6A S/FTP ARMOURED LSZH

4X2X23AWG - Based on Draka UC500 HS23



TECHNICAL FEATURES

Conductors :	**SOLID** plain annealed copper wires (AWG23) **ø 0,56 mm**
Insulation :	Foamskin PE - **ø 1,38 mm**
Cores colour code :	**blue/white; orange/white; green/white; brown/white**
Pair Assembling :	Cores twisted in pairs
Pair Shield :	Al-laminated plastic foil
Overall Shield:	Tinned copper braid
Inner sheath :	Extruded LSZH Thermoplastic Compound
Inner sheath color code:	**Blue**
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:	**Grey**
Outer printing (INKJET) :	**FLEI - 4X2X23AWG - CAT.6A S/FTP ARMOURED LSZH - IEC 60332.1.2 - IEC 60332.3.22 -**
(every 1000 mm)	**Year of Manufacture - CE + Meter Marking**
Under armour diameter :	(7,5 ± 10%) mm
Over armour diameter :	(8,3 ± 10%) mm
Outer diameter :	(10,7 ± 10%) mm
Bending radius :	cable outer diameter x 8 (in fixed installation)
Test Voltage :	1000 V DC for 1' (Between Cores) / 1000 V DC for 1' (Between Cores - Shield)
Loop Resistance :	≤ 154 Ω/Km (@ 20°C)
Insulation Resistance :	≥ 2000 MΩ x km (@ 20°C)
Mutual Capacitance :	Nom. 43 nF/km
Characteristic Impedance :	(100 ± 5) Ω
Applicable Standards	
Design Guidelines :	**Generally to ISO/IEC 11801 / IEC 61156-5 / EN 50173-1 / EN 50288-10 / IEEE 802.3at / af / bt**
ON COMPLETE CABLE	
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22
Acid Gas generation :	IEC 60754.1/2
Smoke density/Light Transm	IEC 61034.2 (LT ≥ 60%)
Hazardous Areas :	IEC 60079.14 par.9.3.2a
Temperature Range :	
ON COMPLETE CABLE	
During Operation :	(-20°C up to +60°C) (in fixed installation)
During installation :	(0°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 :	29/05/2024	Messa			
Checked :	29/05/2024	Spaccasassi			
Approved :	29/05/2024	Cucinotta			

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

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Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-10 & process: MC & discipline : P

Piping	50-10 Water Desalination Package & Distribution						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
001-1-J1	Joint 001-1-J1	ONSHORE	C10004171	TMX27	100	2025-02-18	RFC 2
001-1-J2	Joint 001-1-J2	ONSHORE	C10004172	TMX27	100	2025-02-14	RFC 2
001-1-J3	Joint 001-1-J3	ONSHORE	C10004173	TMX27	100	2025-03-06	RFC 2
001-1-J4	Joint 001-1-J4	ONSHORE	C10004174	TMX27	100	2025-03-06	RFC 2
50-10-TP-006	Test Pack 50-10-TP-006	ONSHORE	C10003270	CLX02A	100	2025-02-04	RFC 2
		ONSHORE	C10003271	CLX02B	100	2025-02-19	RFC 2
		ONSHORE	C10003272	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003273	TMX03	100	2025-02-04	RFC 2
		ONSHORE	C10003274	TMX05	100	2025-02-04	RFC 2
		ONSHORE	C10003276	TPLX05	100	2025-02-04	RFC 2
		ONSHORE	C10004929	CXX02	100	2025-02-25	RFC 2

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006			Dwg	123A90-DDL-PR-PID-80011-24
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10003270		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	Note
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	Note
6	Check bolt tightening and flange management (excluded battery limit joints).	NA
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	OK
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	OK
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	NA
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Inspection points n.4 and 5 have not been verified in erection, to be checked during flange management.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-02-04	2025-02-04	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-04T05:28:28.143Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-04T08:17:08.672Z	

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006			Dwg	123A90-DDL-PR-PID-80011-24
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10003271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	NA
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	OK
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	OK
10	Check all locking device.	OK
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	PL
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-06	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-06T15:28:52.420Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-19T09:51:28.454Z	

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006		Dwg	123A90-DDL-PR-PID-80011-24	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD	
TASK	code	C10003272	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Piping	Form	CXX01	Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	OK
4	Check that the insulation and cladding materials conform to the specifications.	PL
5	Check that the insulation is compatible with the Heat tracing system.	OK
6	Check that the surface condition prior to the application of the insulation	OK
7	Check the installation of wire mesh	OK
8	Check the overlap of the metal cladding.	OK
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	PL
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	PL
11	Control that the locking devices boxes opretated satisfactorily.	PL
12	Check the blinds, the spectacles and the instruments are visible.	NA
13	Check the flange accessibility without damaging the insulation.	PL
14	Check that color coding/line marking/flow direction are correct	OK

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-03-28	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:18:32.448Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-28T07:45:10.953Z	

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006		Dwg	123A90-DDL-PR-PID-80011-24	
	S/Sys	50-10	: Water Desalination Package & Distribution		Module	LD	
TASK	code	C10003273	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity	PIP	Discipline	Piping	Form	TMX03	Cleaning

CLEANING MEDIUM

Air	Water	Steam	Oil	Other	Mechanical
☐	●	☐	☐	☐	☐

Component	NA					
Chemical treatment	No	NA	Filtration	No	Screen size	NA

EQUIPMENTS

Equipment **removed**	Yes	Agreed list of removed fragile devices to be attached to this Test Sheet	NA
Excepted removed equipments, pipework installation is conform to the specifications & PID's			OK
Equipment **added**	No	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	01/02/2025	Start time	10:00	End time	10:20
Flow rate	NA	Duration	20 min	Medium T°	NA

Operation Description

Connected the water source to the lowest point of the piping system.
Maintained a high flow rate to help dislodging and carry away debrises.
Flushing flow kept until the water exiting the system was clear and free of visible contaminants. Expelled water inspected for any debris to be noted.

Safety Precautions

Restricting access to the area.

Result and comments

Water has been found clear of solid debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-02-04	2025-02-04	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-04T05:28:41.161Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-04T08:51:03.962Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006			Dwg	123A90-DDL-PR-PID-80011-24
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10003274		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX05 Pressure Test

TEST DATA

Reference procedure: 123A90-PML-QHSE-PRO-00092

Design pressure: 7.6 barg | Max test pressure: 11.40 barg | Min hold period: 30 min

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium: WATER

TEST RESULTS

Test date: See attachment | Start time: See attachment | End time: See attachment

Ambient temperature is recorded	NA			Test medium temperature is recorded	Yes
Pressure recorded during test hold period	Min: See attachment	Max: See attachment		Variation	See attachment
Line has been depressurised to	NA			At maximum of bar/min	See attachment
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	Yes			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes

If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-02-03	2025-02-04	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-03T08:57:43.227Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-04T08:51:23.914Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	123A90-50-10-TP-006

Instrument

Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A037FON32E
Log temperature *Registrazioni di Temperatura*	Active *Attivo*
Scale range *Campo scala*	(0 ... 1000) bar a
Accuracy *Accuratezza*	0.1 % FS
Tag number *Numero tag*	
Communication *Comunicazione*	Wireless (00:13:43:C5:19:D5)

Measurement conditions

Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	01:05:56
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	10:24:28 am

Logger protocol

Protocollo di acquisizione elenco dati

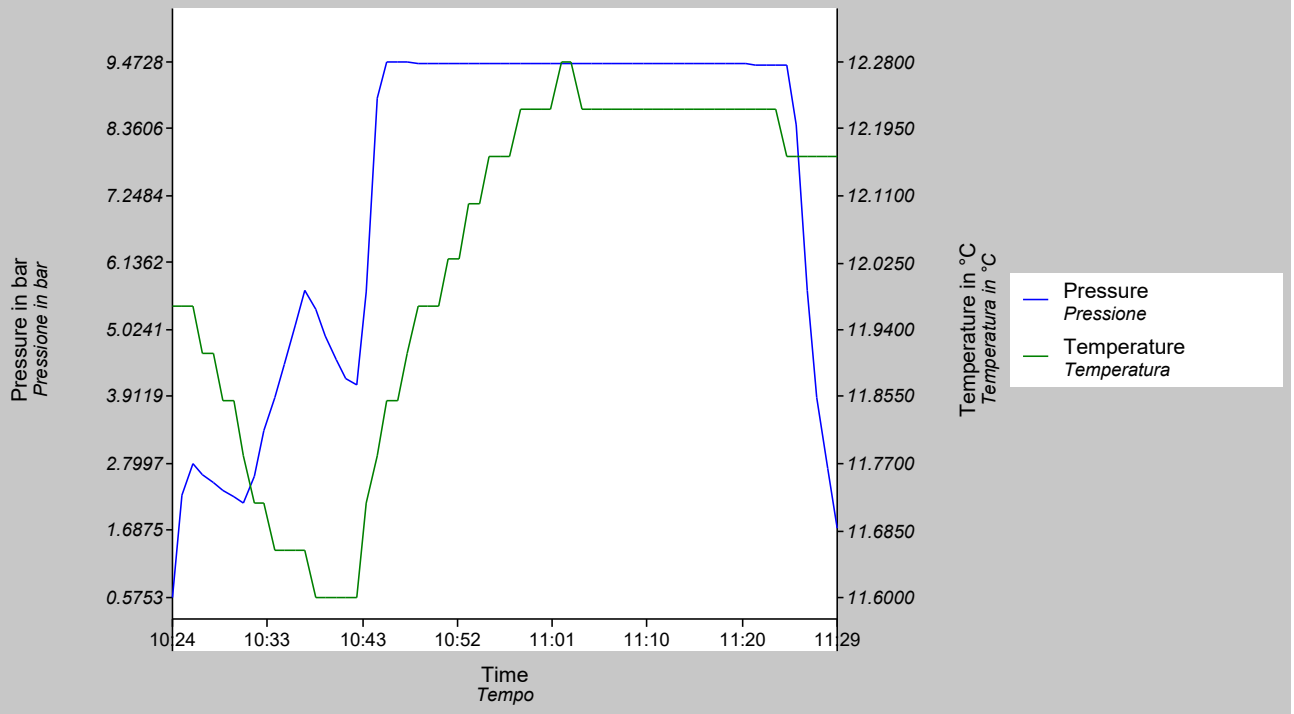
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-50-10-TP-006

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/01/2025 10:24:28.000	0.5753	11.9700
02/01/2025 10:25:28.000	2.2814	11.9700
02/01/2025 10:26:28.000	2.7886	11.9700
02/01/2025 10:27:28.000	2.6279	11.9100
02/01/2025 10:28:28.000	2.4865	11.9100
02/01/2025 10:29:28.000	2.3591	11.8500
02/01/2025 10:30:28.000	2.2473	11.8500
02/01/2025 10:31:28.000	2.1440	11.7800
02/01/2025 10:32:28.000	2.5820	11.7200
02/01/2025 10:33:28.000	3.3540	11.7200
02/01/2025 10:34:28.000	3.9090	11.6600
02/01/2025 10:35:28.000	4.4453	11.6600
02/01/2025 10:36:28.000	5.0965	11.6600
02/01/2025 10:37:28.000	5.6830	11.6600
02/01/2025 10:38:28.000	5.3608	11.6000
02/01/2025 10:39:28.000	4.9074	11.6000
02/01/2025 10:40:28.000	4.5370	11.6000

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-50-10-TP-006

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/01/2025 10:41:28.000	4.2003	11.6000
02/01/2025 10:42:28.000	4.1022	11.6000
02/01/2025 10:43:28.000	5.6605	11.7200
02/01/2025 10:44:28.000	8.8827	11.7800
02/01/2025 10:45:28.000	9.4728	11.8500
02/01/2025 10:46:28.000	9.4622	11.8500
02/01/2025 10:47:28.000	9.4605	11.9100
02/01/2025 10:48:28.000	9.4559	11.9700
02/01/2025 10:49:28.000	9.4554	11.9700
02/01/2025 10:50:28.000	9.4541	11.9700
02/01/2025 10:51:28.000	9.4503	12.0300
02/01/2025 10:52:28.000	9.4471	12.0300
02/01/2025 10:53:28.000	9.4445	12.1000
02/01/2025 10:54:28.000	9.4457	12.1000
02/01/2025 10:55:28.000	9.4448	12.1600
02/01/2025 10:56:28.000	9.4415	12.1600
02/01/2025 10:57:28.000	9.4413	12.1600
02/01/2025 10:58:28.000	9.4466	12.2200
02/01/2025 10:59:28.000	9.4447	12.2200
02/01/2025 11:00:28.000	9.4413	12.2200
02/01/2025 11:01:28.000	9.4380	12.2200
02/01/2025 11:02:28.000	9.4399	12.2800
02/01/2025 11:03:28.000	9.4363	12.2800
02/01/2025 11:04:28.000	9.4379	12.2200
02/01/2025 11:05:28.000	9.4376	12.2200
02/01/2025 11:06:28.000	9.4352	12.2200
02/01/2025 11:07:28.000	9.4338	12.2200
02/01/2025 11:08:28.000	9.4346	12.2200
02/01/2025 11:09:28.000	9.4362	12.2200
02/01/2025 11:10:28.000	9.4398	12.2200
02/01/2025 11:11:28.000	9.4391	12.2200
02/01/2025 11:12:28.000	9.4365	12.2200
02/01/2025 11:13:28.000	9.4364	12.2200
02/01/2025 11:14:28.000	9.4402	12.2200
02/01/2025 11:15:28.000	9.4390	12.2200
02/01/2025 11:16:28.000	9.4404	12.2200
02/01/2025 11:17:28.000	9.4360	12.2200
02/01/2025 11:18:28.000	9.4336	12.2200
02/01/2025 11:19:28.000	9.4342	12.2200
02/01/2025 11:20:28.000	9.4337	12.2200
02/01/2025 11:21:28.000	9.4333	12.2200
02/01/2025 11:22:28.000	9.4294	12.2200
02/01/2025 11:23:28.000	9.4306	12.2200
02/01/2025 11:24:28.000	9.4290	12.1600
02/01/2025 11:25:28.000	8.4170	12.1600
02/01/2025 11:26:28.000	5.6789	12.1600
02/01/2025 11:27:28.000	3.9087	12.1600
02/01/2025 11:28:28.000	2.7304	12.1600
02/01/2025 11:29:28.000	1.7195	12.1600

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www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24

Certificate of Calibration

- data di emissione date of issue	2024-12-10
- cliente customer	FAST AUTOMATION SRL VIA DELLA PREVIDENZA SOCIALE, 8 IT-42124 REGGIO EMILIA (RE)
- destinatario receiver	ROSETTI MARINO SPA - YARD PIOMBONI VIA DEL MARCHESATO, 37 IT-48122 MARINA DI RAVENNA (RA)

Il presente certificato di taratura è emesso in base all'accreditamento LAT N. 114 rilasciato in accordo ai decreti attuativi della legge n. 273/1991 che ha istituito il Sistema Nazionale di Taratura (SNT). ACCREDIA attesta le capacità di misura e di taratura, le competenze metrologiche del Centro e la riferibilità delle tarature eseguite ai campioni nazionali ed internazionali delle unità del Sistema Internazionale delle Unità (SI).
Questo certificato non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Centro.

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A037FON32E
- data di ricev. oggetto *date of receipt of item*	2024-11-29
- data delle misure *date of measurements*	2024-12-10
- registro di laboratorio *laboratory reference*	0580-SM-24

This certificate of calibration is issued in compliance with the accreditation LAT No.114 granted according to decrees connected with Italian law No. 273/1991 which has established the National Calibration System. ACCREDIA attests the calibration and measurement capability, metrological competence of the Centre and the traceability of calibration results to the national and International standards of the International System of Units (SI).
This certificate may not be partially reproduced, except with the prior written permission of the issuing Centre.

I risultati di misura riportati nel presente Certificato sono stati ottenuti applicando le procedure di taratura citate alla pagina seguente, dove sono specificati anche i campioni o gli strumenti che garantiscono la catena di riferibilità del Centro e i rispettivi certificati di taratura in corso di validità. Essi si riferiscono esclusivamente all'oggetto in taratura e sono validi nel momento e nelle condizioni di taratura, salvo diversamente specificato.

The measurement results reported in this Certificate were obtained following the calibration procedures given in the following page, where the reference standards or instruments are indicated which guarantee the traceability chain of the laboratory, and the related calibration certificates in the course of validity are indicated as well. They relate only to the calibrated item and they are valid for the time and conditions of calibration, unless otherwise specified.

Le incertezze di misura dichiarate in questo documento sono state determinate conformemente alla Guida ISO/IEC 98 e al documento EA-4/02. Solitamente sono espresse come incertezza estesa ottenuta moltiplicando l'incertezza tipo per il fattore di copertura k corrispondente ad un livello di fiducia di circa il 95 %. Normalmente tale fattore k vale 2.

The measurement uncertainties stated in this document have been determined according to the ISO/IEC Guide 98 and to EA-4/02. Usually, they have been estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor k is 2.

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

WIKA Italia S.r.l. & C. s.a.s.
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Centro di Taratura LAT N°114
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Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

Misuratore di pressione elettronico *Electrical pressure gauge*	
Tipo *Model*	Misuratore di pressione elettronico Electrical pressure gauge
Numero di matricola *Serial No.*	1A037FON32E
Campo di misura *Scale range*	(0 ... 1000) bar g
Accuratezza dichiarata dal costruttore *Accuracy declared by the manufacturer*	0,1 % FS
Risoluzione *Resolution (scale division)*	0,1 bar
Tag. N. *Tag No.*	--

Procedura di taratura e catena di riferibilità
Calibration procedure and traceability chain

La taratura è stata effettuata in accordo alla linea guida DKD-R 6-1 "Taratura di strumenti di pressione" (versione 03/2014) procedura B, per confronto fra i valori dello strumento in taratura con quelli di riferimento dati dal campione di lavoro.

Calibration was carried out according to DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) procedure B, by comparing the measured values of the calibration item with those of the reference or working standard.

I risultati riportati sono stati ottenuti applicando le procedure n° LMO-PT-01 rev.2

The results have been obtained using the procedures n° LMO-PT-01 rev.2

La catena di riferibilità ha inizio dai campioni di riferimento n° PM1-09

The traceability chain starts from the reference standards n° PM1-09

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

Laboratorio WIKA ITALIA - Laboratorio di Modugno (BA)
WIKA ITALY Laboratory - Modugno (BA)

Campione di lavoro
Working Standard

Norma di riferimento (RS) Bilancia di pressione *Reference standard (RS) Dead-weight tester*	
Tipo *Model*	PM1-09
Certificato di taratura *Calibration mark*	D-K-15105/D21090
Campo di misura *Scale range*	(10 ... 2500) bar g
Accuratezza *Accuracy*	0,015 % della lettura + 255 Pa

Operatore
Technichian

Francesco Donatelli

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LAT N° 114

Condizioni di misura
Measurement conditions

Schema di collegamento *Assembly*	
Fluido utilizzato *Pressure medium*	Sebacate *Sebacate*
Livello di riferimento *Refence height (for reference value)*	Superficie di tenuta DUT *Sealing face DUT*
Posizione di montaggio *Position during calibration*	verticale *vertical*

Note di taratura
Calibration Note

Lo strumento è stato tarato e riconsegnato nelle stesse condizioni in cui è arrivato nel laboratorio, in accordo con il metodo "as found as left" / The device under test (DUT) was calibrated in the same conditions it was arrived in laboratory, according to the method "as found as left".

Condizioni Ambientali
Environmental conditions

Temperatura *Temperature*	(22 ± 1,5)	°C
Pressione atmoferica *Atmospheric pressure*	(1007,5 ± 0,2)	hPa
Umidità relativa *Rel. Humidity*	(50 ± 15)	% UR

I dati meteo sono stati acquisiti tramite stazione meteo WIKA CPU6000-W s/n.1A00VCX6GJ2

Weather data were acquired via the WIKA CPU6000-W weather station s/n.1A00VCX6GJ2

Misure rilevate
Measurement results

Valore di riferimento *Reference value RS* bar	**Letture** *Reading DUT* bar		
	M1	**M2**	**M3**
0,00	0,0	0,0	0,0
99,91	100,0	100,0	100,0
199,82	200,0	200,0	200,0
299,73	299,9	300,0	299,9
399,63	399,8	399,9	399,8
499,53	499,6	499,7	499,7
599,44	599,5	599,6	599,5
699,34	699,3	699,4	699,3
799,24	799,2	799,3	799,2
899,14	899,1	899,1	899,1
999,04	999,0	999,0	999,0

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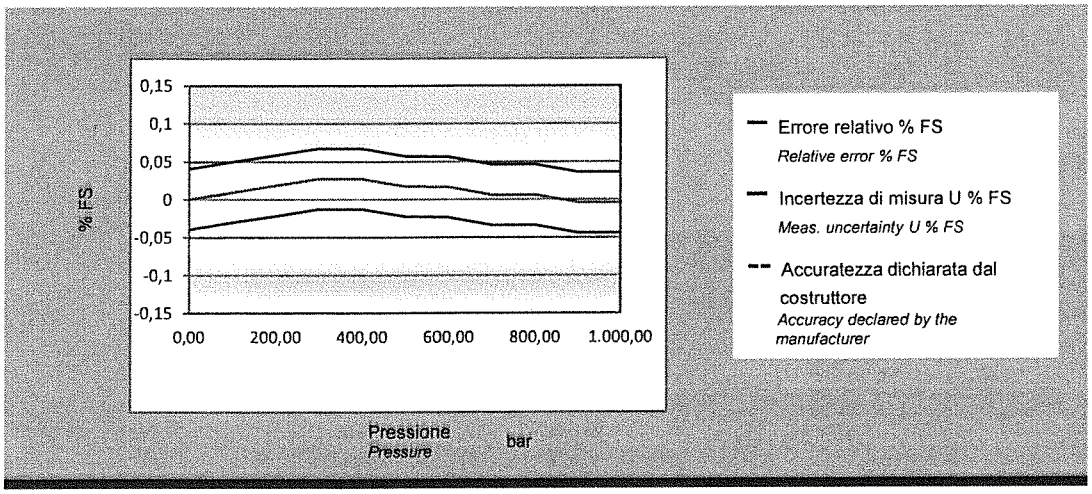
LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

Incertezza di misura
Uncertainty of measurement

Valori di riferimento *Reference value RS* bar	Media delle misure *Mean value* bar	Errore *Error* bar	Ripetibilità *Repeatability* bar	Isteresi *Hysteresis* bar	Incertezza di misura *Meas. Uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
99,91	100,0	0,1	0,0	0,0	0,40
199,82	200,0	0,2	0,0	0,0	0,40
299,73	300,0	0,3	0,0	0,1	0,40
399,63	399,9	0,3	0,0	0,1	0,40
499,53	499,7	0,2	0,1	0,1	0,40
599,44	599,6	0,2	0,0	0,1	0,40
699,34	699,4	0,1	0,0	0,1	0,40
799,24	799,3	0,1	0,0	0,1	0,40
899,14	899,1	0,0	0,0	0,0	0,40
999,04	999,0	0,0	0,0	0,0	0,40

Grafico degli errori di misura
Graphical representation of measurement uncertainty



L'incertezza estesa senza correzione del DUT è pari a 0,7 bar
The expanded uncertainty of the DUT without correction is equal to

Questo dato è ottenuto come MAX{Incertezza_di_misura$_i$ + |Errore$_i$|} della tabella precedente
This data is obatined as MAX{Meas._uncertainty$_i$ + |Error$_i$|} of the previous table

Il presente certificato non rappresenta una dichiarazione di conformità a specifica
This certificate is not a statement of compliance

Base Load Power Hub (BLPH)

TEST PACK

N°50-10-TP-006
SUB-SYSTEM N° 50-10

System	50
Sub-System	50-10
Test Pressure	9 barg
Test Fluid	WATER
Test Duration	30 min

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line – NOT APPLICABLE
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

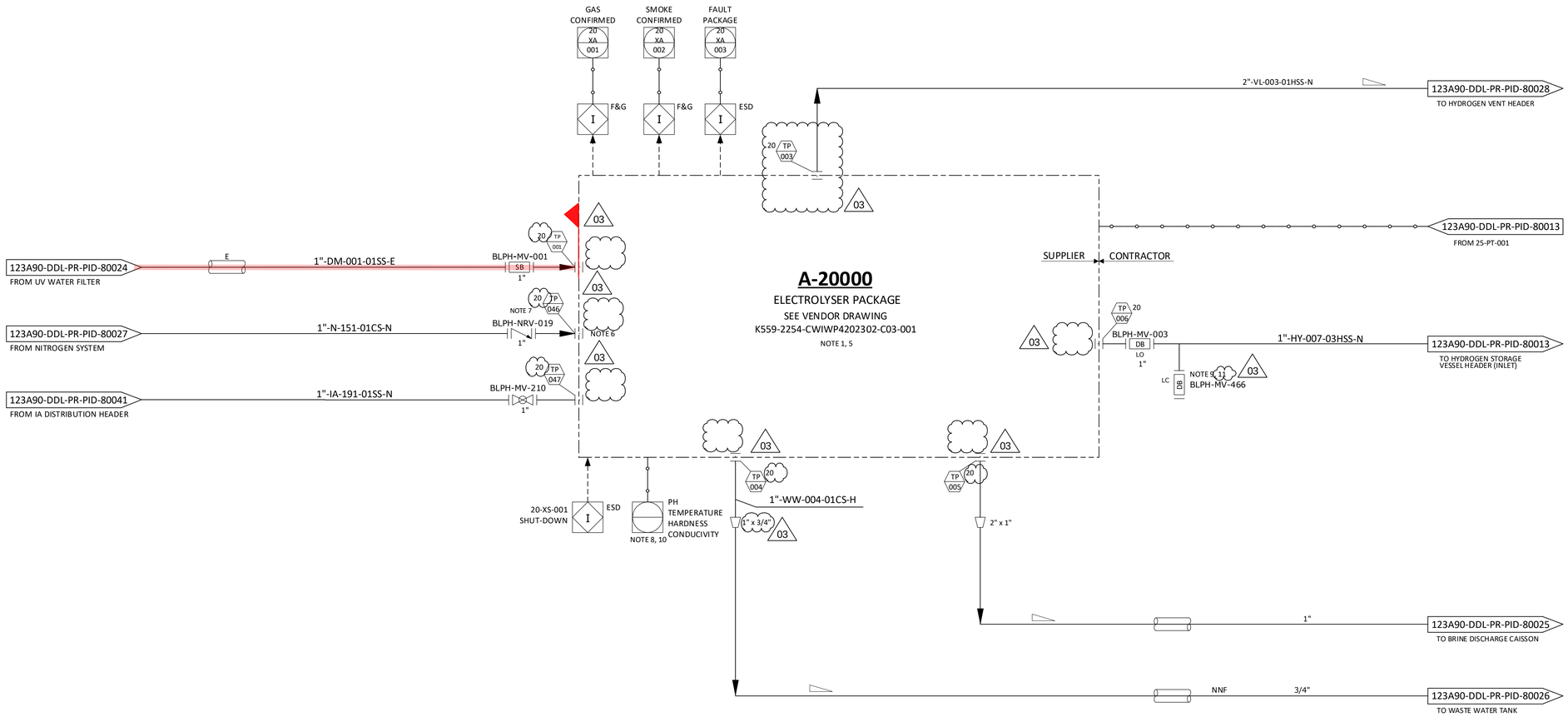
DRAWING NO. DRAWING_NO.

REV. REV

A-20000

ELECTROLYSER PACKAGE

DUTY: 2.5MW
DESIGN PRESSURE: 40 barg
DESIGN TEMPERATURE: 80 °C
H2 GENERATING CAPACITY: 500 Nm³/h



50-10-TP-006
9.00 barg

NOTES

1. PACKAGE SUPPLIED WITH POWER FROM THE BLPH ELECTRICAL SYSTEM.
2. DELETED.
3. DELETED.
4. DELETED.
5. ELECTROLYSER PACKAGE INCLUDES AN OXYGEN VENT LINE WHICH IS IN THE SCOPE OF SUPPLY OF THE ELECTROLYSER PACKAGE UP TO THE ATMOSPHERE. NO PHYSICAL INTERFACE IS PRESENT BETWEEN ELECTROLYSER PACKAGE AND CONTRACTOR ON THIS LINE.
6. AN ISOLATION VALVE DOWNSTREAM THE CHECK VALVE NRV-019 IS PROVIDED WITHIN THE PACKAGE A-20000.
7. CHECK VALVE NRV-019 TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE ELECTROLYSER PACKAGE A-20000.
8. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
9. NITROGEN PURGING CONNECTION TO BE LOCATED AS CLOSE AS POSSIBLE TO MANUAL VALVE BLPH-MV-003.
10. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM CONTROL SYSTEM TO ELECTROLISER UCP IN ADDITION TO THE OTHER SOFTWARE SIGNALS. 03
11. MANUAL VALVE BLPH-MV-466 TO BE CONNECTED WITH MANUAL VALVE BLPH-MV-275 (INSTALLED ON NITROGEN GENERATION PACKAGE EXIT LINE) BY MEAN ON A FLEXIBLE HOSE DURING COMMISSIONING PHASE FOR PURGING OPERATION.

HOLDS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80011	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80023

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr

SUPPLIER | CONTRACTOR

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

1"-DM-001-01SS-E-1 → 123A90-DDL-PR-PID-80011
TO ELECTROLYSER PACKAGE

TP 002 50 03

PH
TEMPERATURE
HARDNESS
CONDUCIVITY
NOTE 8

FOR CONTINUATION SEE DOC N.
123A90-DDL-PR-PID-80023

50-10-TP-006
9.00 barg

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.
7. DELETED.
8. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM WATER TREATMENT UCP TO CONTROL SYSTEM IN ADDITION TO THE OTHER SOFTWARE SIGNALS.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

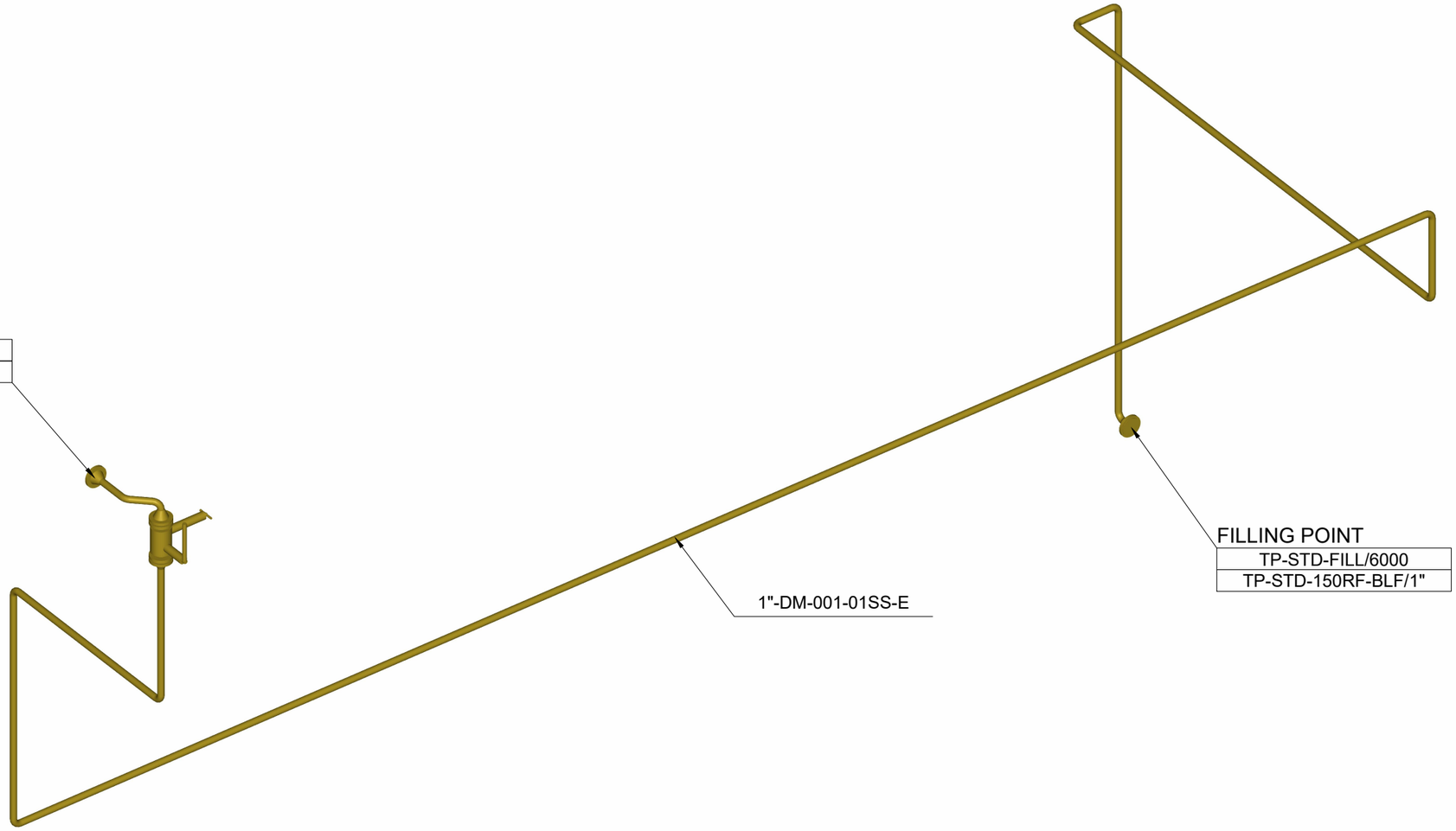
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER TREATMENT PLANT SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80024	001	03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



50-10-TP-006

9 barg

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND | ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
50-10-TP-006

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

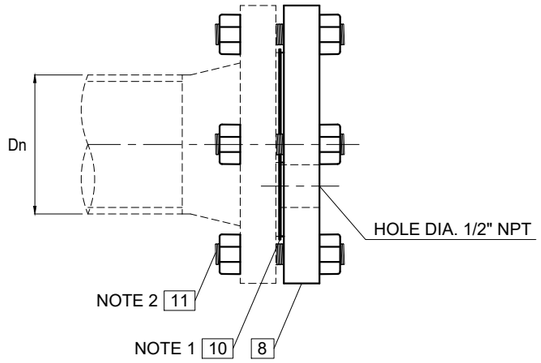
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL TEST	TP-STD-FILL/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3	1	3	
ALL TEST	TP-STD-FILL/6000	1MECH069	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4	1	4	
ALL TEST	TP-STD-REC/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9	1	9	
ALL TEST	TP-STD-REC/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	CAPFSS00200H00	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	CPL0SS00240H00	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	E900SS00340H00	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-PLGNPT/1/2"	PLGHSS00090H00	Plug Hex. Head THRD-M NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
TP-006	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	2	2	
TP-006	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	2	2	
TP-006	TP-STD-150RF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	2	8	

STD NAME	RATING	DESCRIPTION
TP-STD-150RF	150 RF	STANDARD FOR BLIND POINT

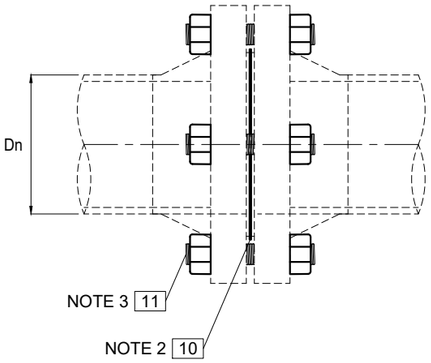
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-150RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=60 MM	4
TP-STD-150RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=85 MM	4
TP-STD-150RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-150RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-150RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-150RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=120 MM	12
TP-STD-150RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=125 MM	12
TP-STD-150RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=135 MM	12
TP-STD-150RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=140 MM	16
TP-STD-150RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=150 MM	16
TP-STD-150RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=160 MM	20
TP-STD-150RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=175 MM	20



TP-STD-150RF-BLF/Dn
BLIND FLANGE



TP-STD-150RF-GSK/Dn
GASKET ONLY

NOTES

1. GASKET MATERIAL AS PER PIPING CLASS
2. STUD BOLTS AND NUTS MATERIAL AS PER TEST MTO

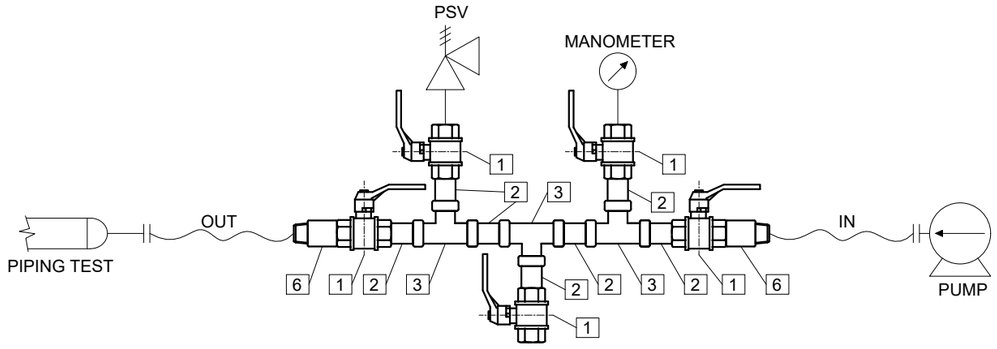
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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PIPING TEST STANDARD DRAWING
TP-STD-150RF
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_150RF	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-FILL	3000 / 6000 / 9000	STANDARD FOR FILLING POINT
TP-STD-FILL/RATING		



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-FILL/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 523 bar 304SS	2

NOTES

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

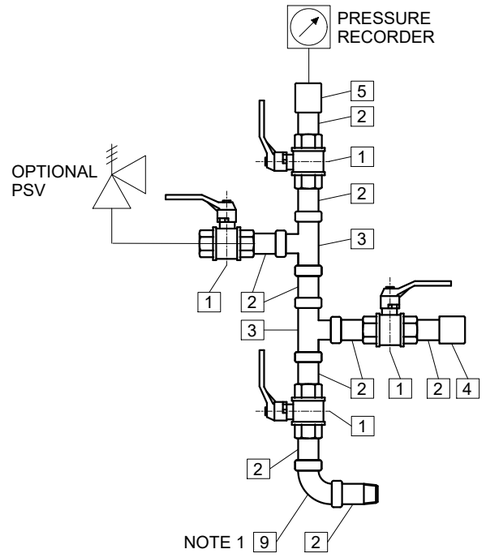
TP-STD-FILL

TP-STD-FILL/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_FILL	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-REC	3000 / 6000 / 9000	STANDARD FOR RECORDING POINT

TP-STD-REC/RATING



TP-STD-REC/RATING
RECORDING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-REC/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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PIPING TEST STANDARD DRAWING
TP-STD-REC
TP-STD-REC/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_REC	00	1 OF 1

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
1	DM-001	001	1	01SS	E	3,38	40S	Yes	1"-DM-001-01SS-E	123A90-DDL-PR-PID-80011	6,00	50	50-10	TP-006	Water	9.00	Demineralized Water	Stainless Steel	INF	Art. 4, par. 3	N/A	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

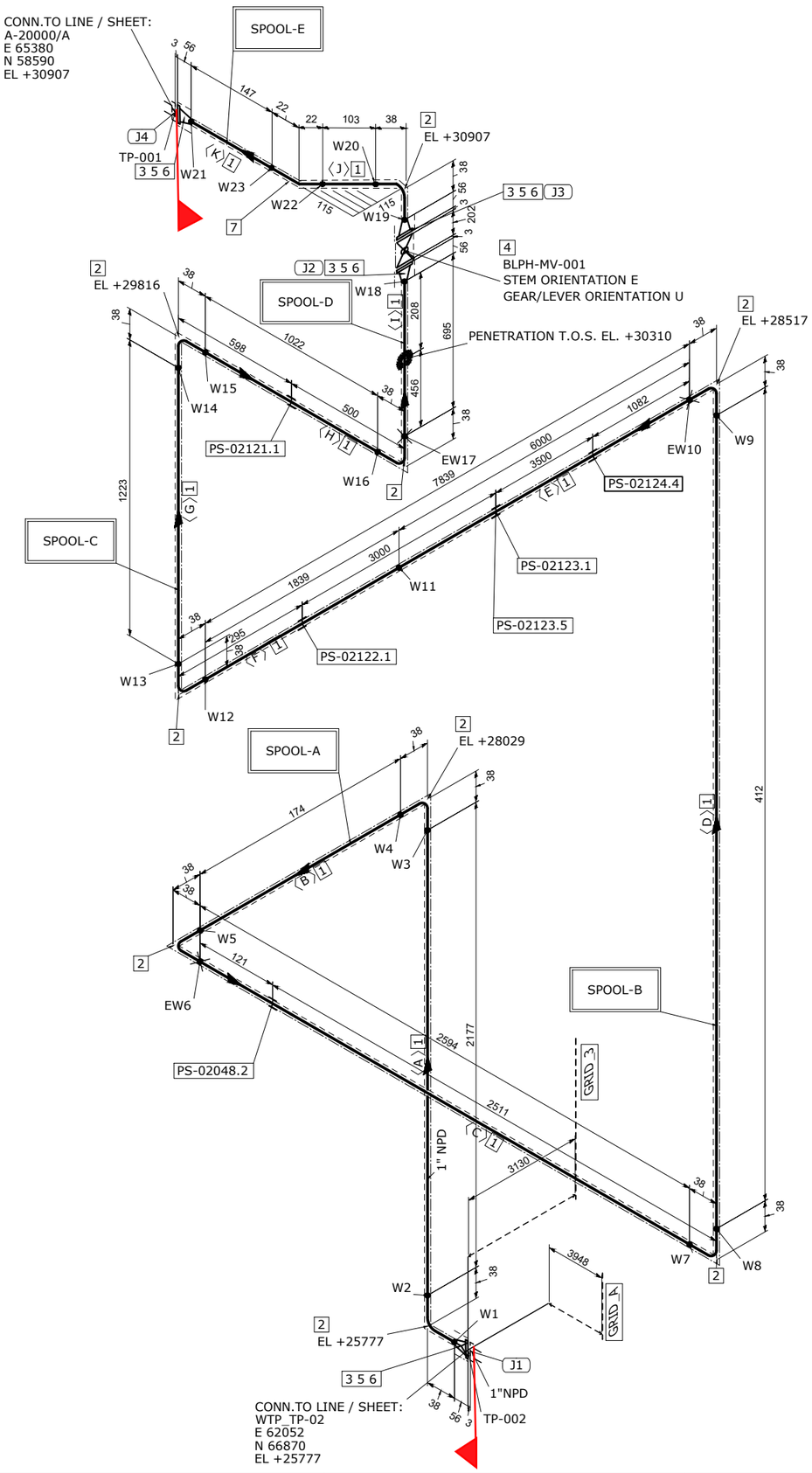
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
1	123A90-FDL-PP-DI-00001-01	**001**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-DM-001-01SS-E	27/08/2024													**00**	**03**		**TP-006**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

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TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00001 | SHEET / OF: 1/1 | REV.: 00

50-10-TP-006

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]		
HEAT TRACING	Yes		TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

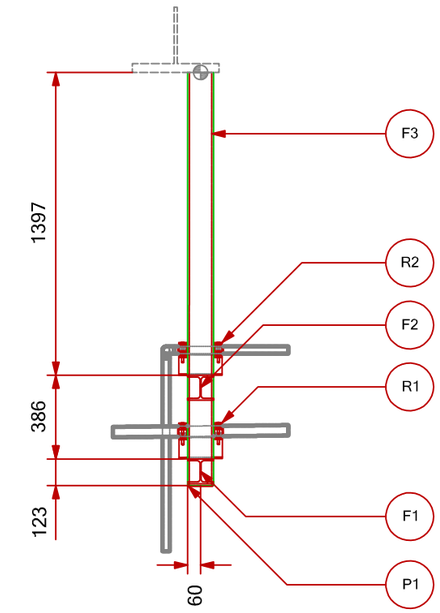
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

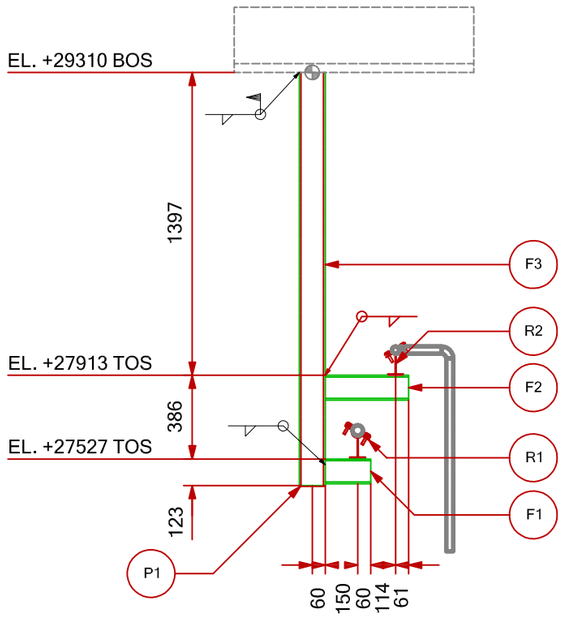
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

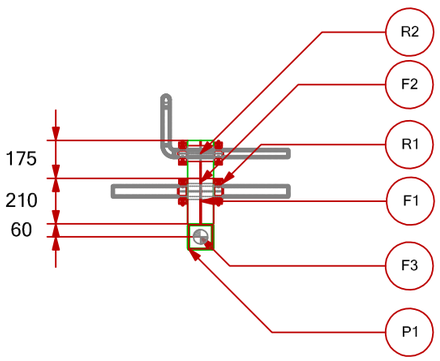
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-02048	B2	PIP	UPPER DECK		1"-DM-001-01SS-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-006
PS-02121	B1	PIP	UPPER DECK		1"-DM-001-01SS-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-006
PS-02122	B1	PIP	UPPER DECK		1"-DM-001-01SS-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-006
PS-02123	B1	PIP	UPPER DECK		1"-DM-001-01SS-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-006
PS-02123	B5	PIP	UPPER DECK		1"-DM-001-01SS-E	C-33 - 2 - B - 2		1	4,362	0,048	00	19/08/2024	IFR		TP-006
PS-02124	B4	PIP	UPPER DECK		1"-DM-001-01SS-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-006



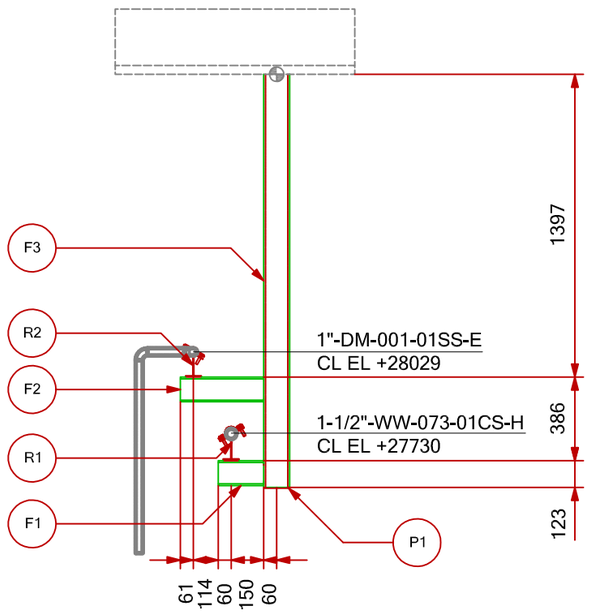
VIEW LOOKING NORTH



VIEW LOOKING WEST



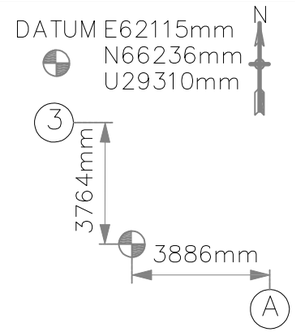
PLAN VIEW

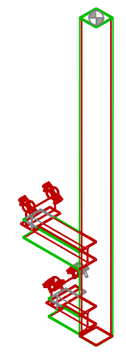


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1.1/2"-97-91-200	-	-	1	-	5.01	0.040
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HEA120	Carbon Steel	210	1	19.98	4.20	0.147
F2	BEAM	HEA120	Carbon Steel	385	1	19.98	7.69	0.266
F3	BEAM	RHS120x120x8	Carbon Steel	1906	1	27.79	52.97	1.675
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	74.0	2.24





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

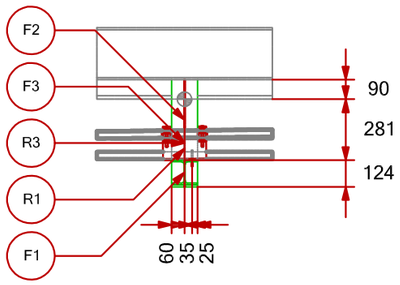
ROSETTI MARINO

TITLE :

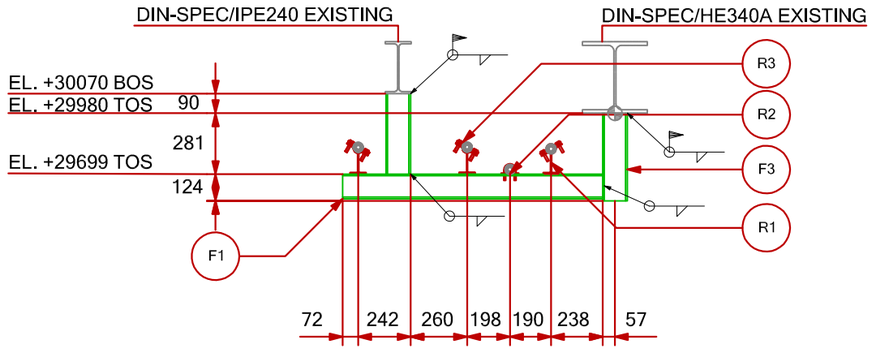
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02048

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

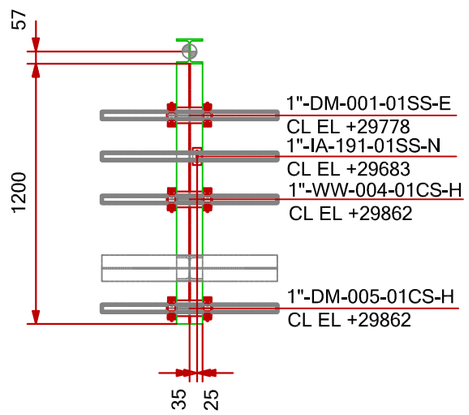
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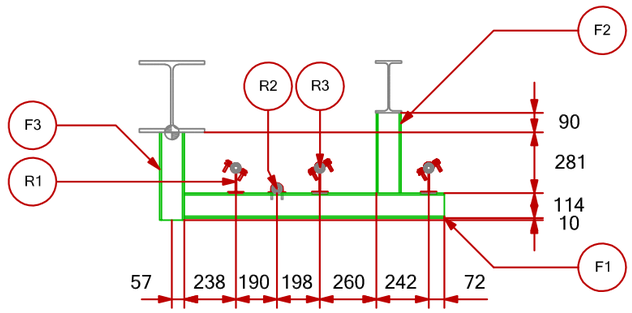
VIEW LOOKING NORTH



VIEW LOOKING WEST



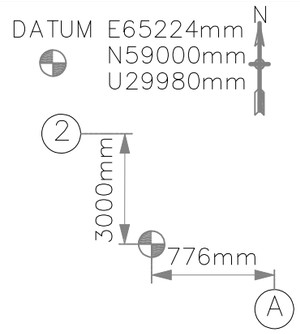
PLAN VIEW

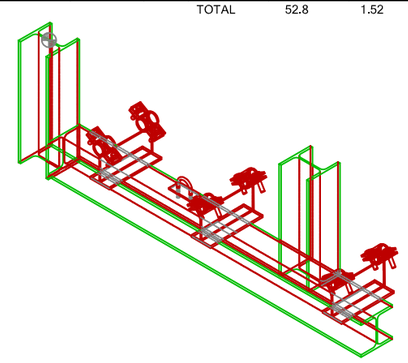


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-211-1"	-	-	1	-	0.29	-
R3	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	1200	1	19.98	23.98	0.817
F2	BEAM	HEA120	Carbon Steel	371	1	19.98	7.41	0.256
F3	BEAM	HEA120	Carbon Steel	405	1	19.98	8.09	0.279
						TOTAL	52.8	1.52





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

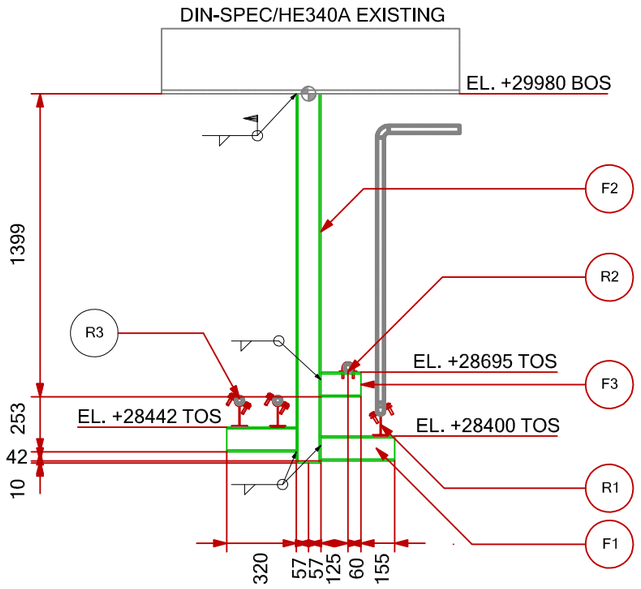
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

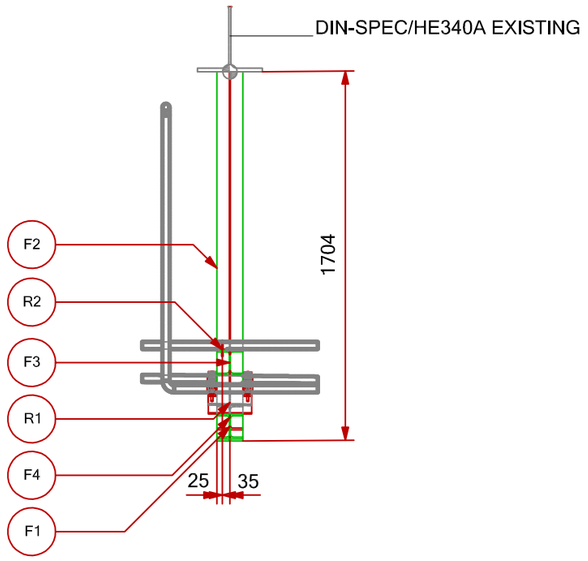
PS-02121

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

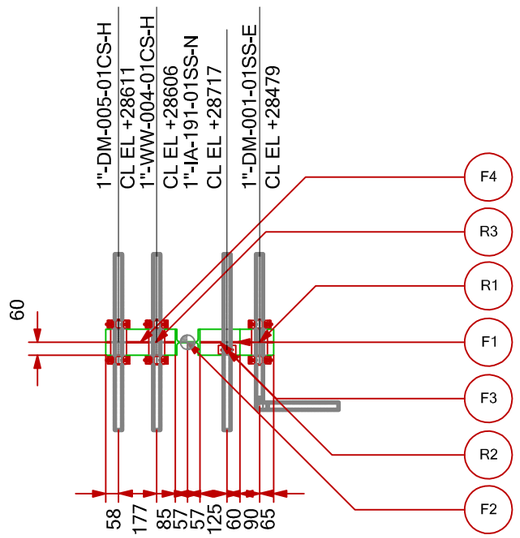
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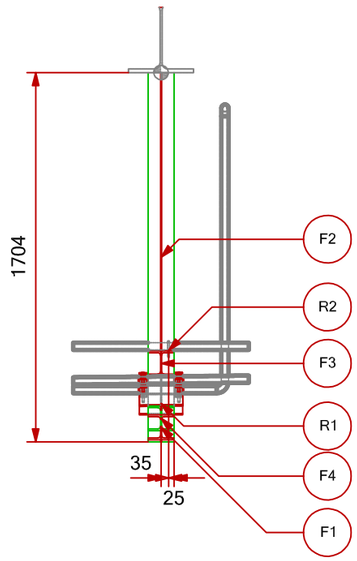
VIEW LOOKING NORTH



VIEW LOOKING WEST



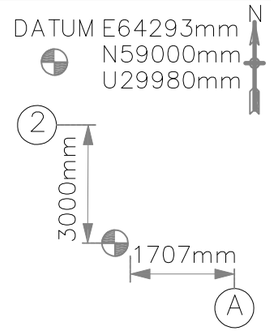
PLAN VIEW

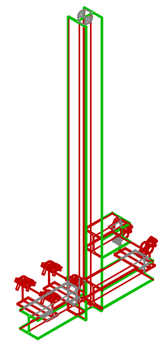


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-211-1"	-	-	1	-	0.29	-
R3	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	340	1	19.98	6.79	0.235
F2	BEAM	HEA120	Carbon Steel	1704	1	19.98	34.04	1.158
F3	BEAM	HEA120	Carbon Steel	185	1	19.98	3.70	0.130
F4	BEAM	HEA120	Carbon Steel	320	1	19.98	6.39	0.222
						TOTAL	64.3	1.91





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

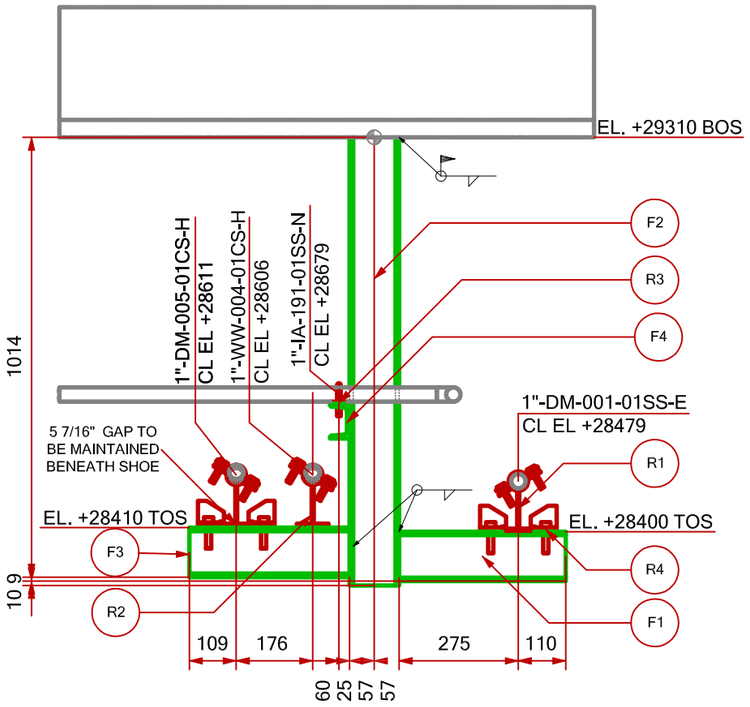
ROSETTI MARINO

TITLE :

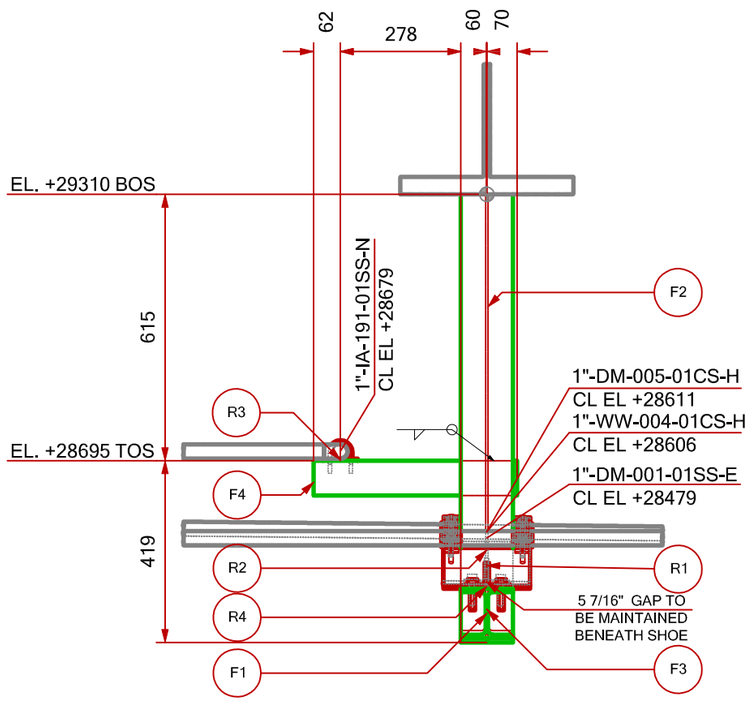
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02122

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

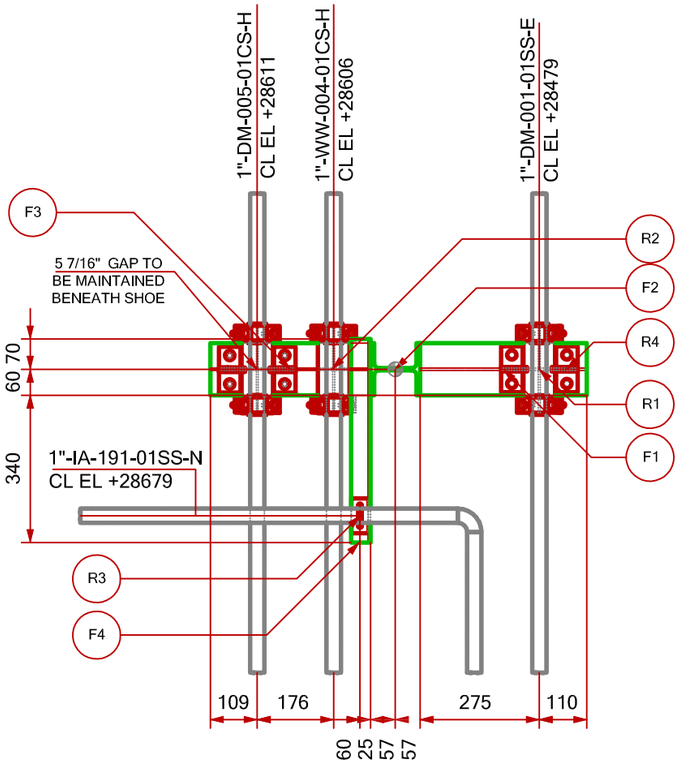
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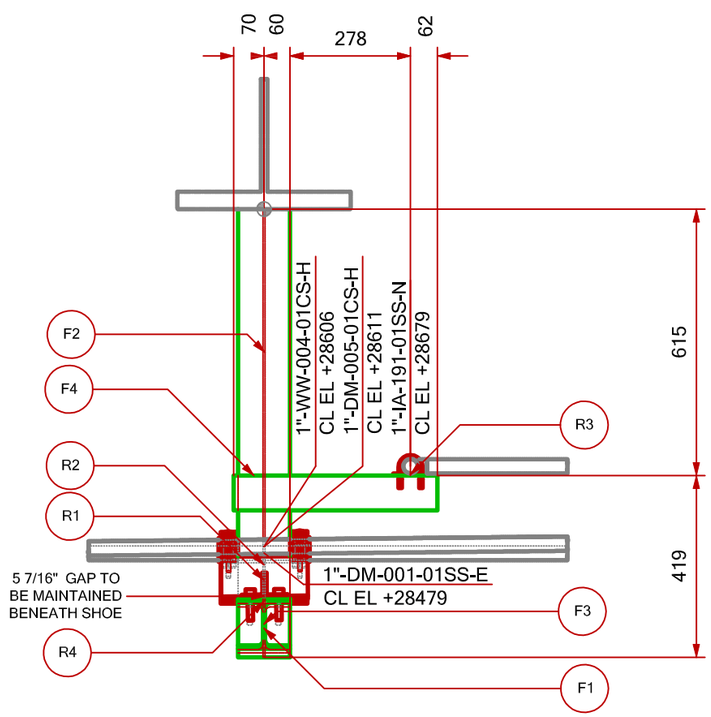
VIEW LOOKING NORTH



VIEW LOOKING WEST



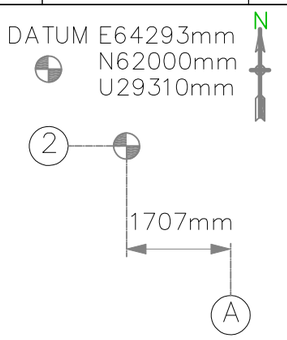
PLAN VIEW

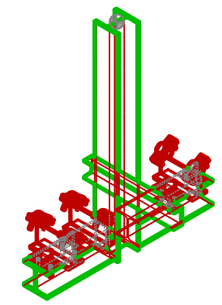


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
R3	STD	S-211-1"	-	-	1	-	0.29	-
R4	STD	C-33-2-B-2	-	-	2	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	385	1	19.98	7.69	0.266
F2	BEAM	HEA120	Carbon Steel	1034	1	19.98	20.65	0.705
F3	BEAM	HEA120	Carbon Steel	370	1	19.98	7.39	0.256
F4	BEAM	UPN80	Carbon Steel	470	1	8.66	4.07	0.149
						TOTAL	61.9	1.64





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

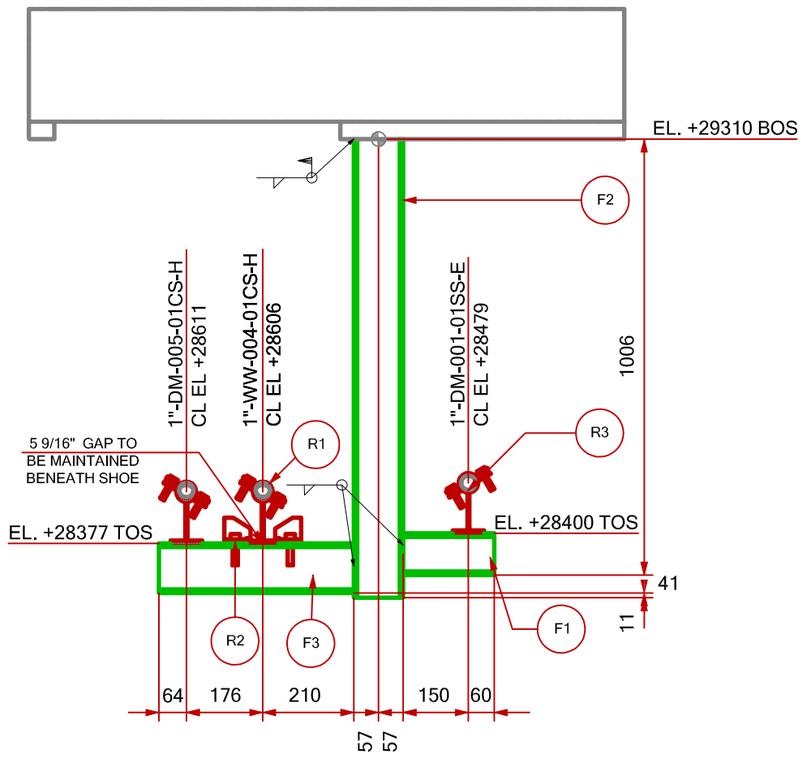
ROSETTI MARINO

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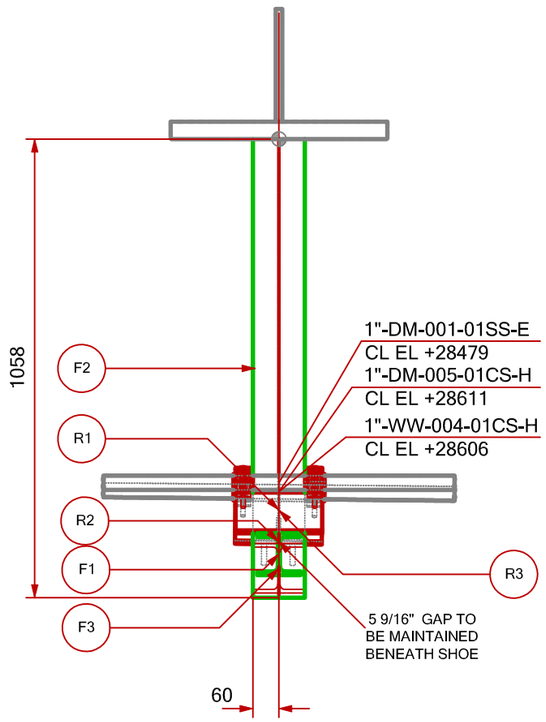
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02123

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

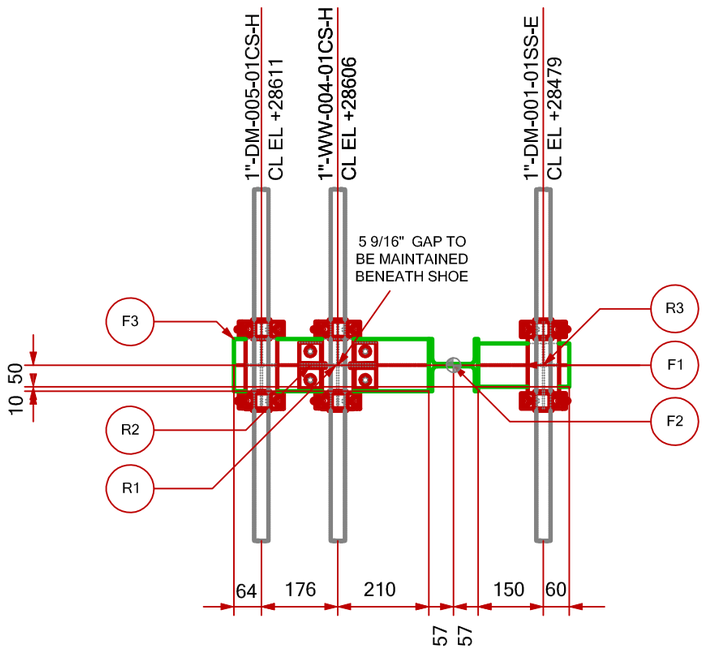
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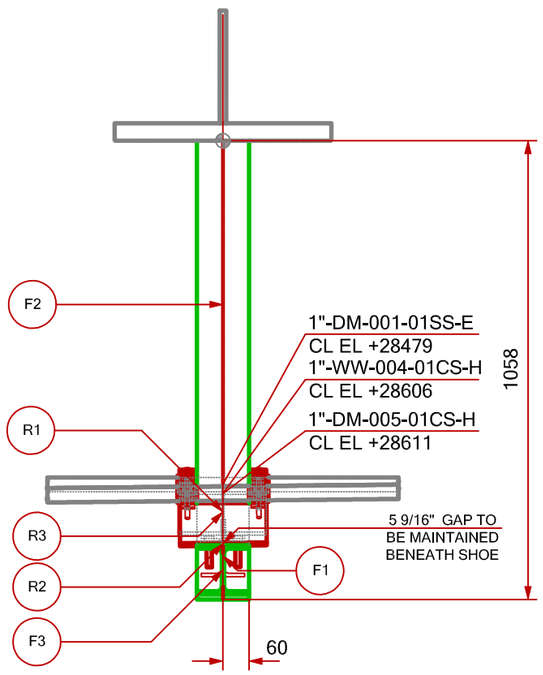
VIEW LOOKING NORTH



VIEW LOOKING WEST



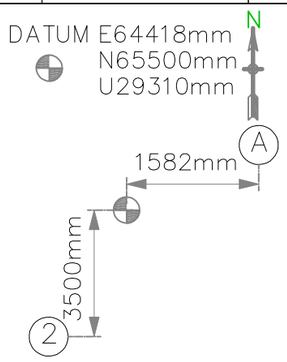
PLAN VIEW

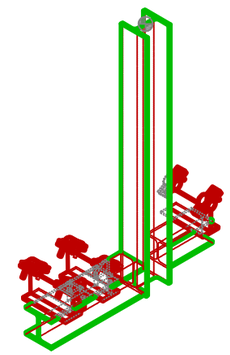


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
R2	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
R3	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HEA100	Carbon Steel	210	1	16.76	3.52	0.122
F2	BEAM	HEA120	Carbon Steel	1058	1	19.98	21.14	0.721
F3	BEAM	HEA120	Carbon Steel	450	1	19.98	8.99	0.310
						TOTAL	51.1	1.37





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02124

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1 : 10
DRAWN	CHECKED / APPROVED	DATE	19/08/24
DRAWING NO.	123A90-DDL-PP-DD-72000	SHEET	1 of 1
		REV.	00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

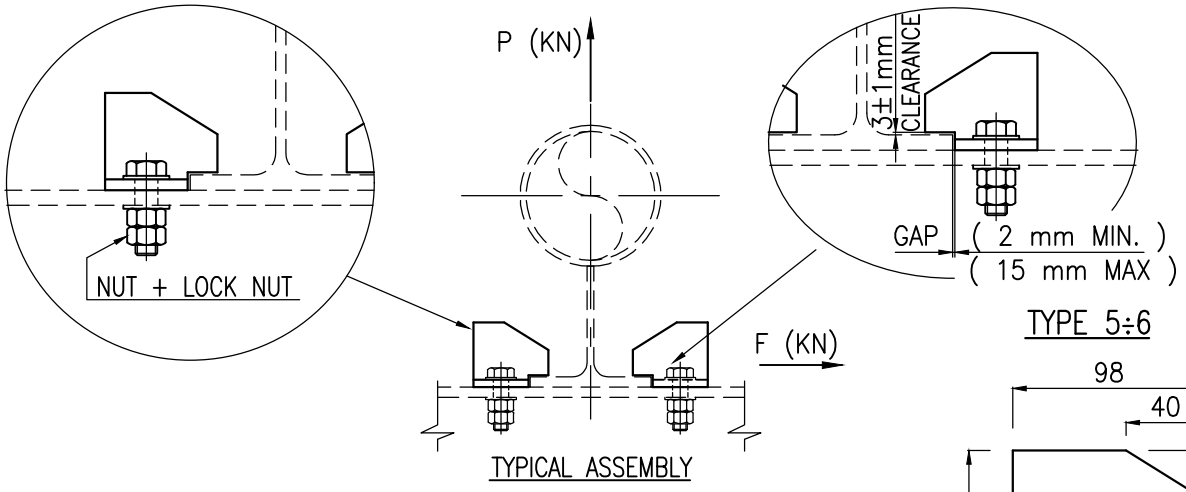
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Revision: 0

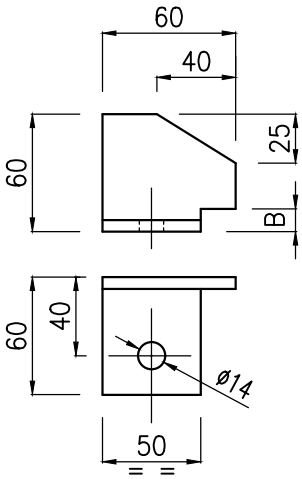
Date: –

GUIDA BULLONATA CON HOLD–DOWN PER SCARPETTE
BOLTED GUIDE WITH HOLD DOWN FOR SHOES

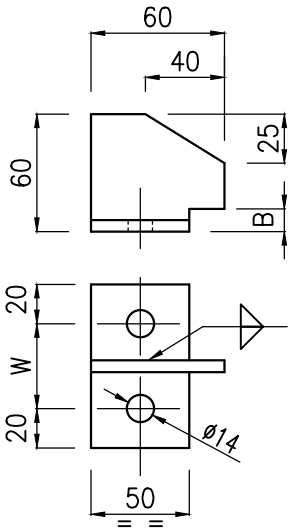
C–33



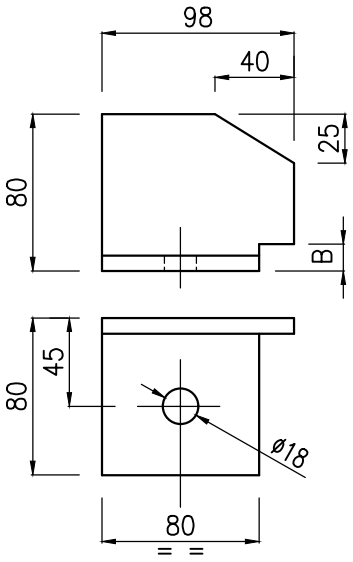
TYPE 1 (NOTE 4)



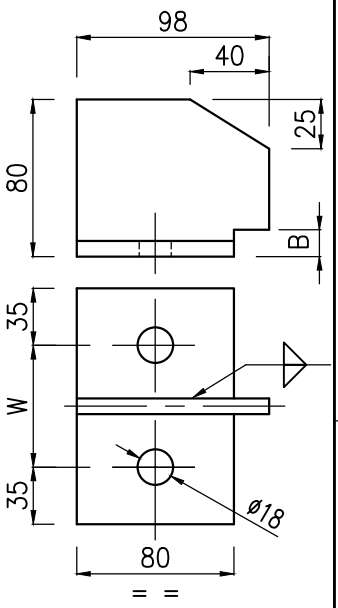
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



Example of designation : STD – TYPE – SIZE – GAP
(C–33 – 6 – M – 2)

TYPE	SHOE THK.	B	DIM. HOLE	SECTION	BOLTING	F (KN)	P (KN)
1	9–10	12	13	L60x60x6	M12x60	10	32
2	9–10	12	13	PLT. 10THK	M12x60	20	32
3	11–12	14	18	L80x80x8	M16x70	18	59
4	13–14	16	18	L80x80x8	M16x70	18	59
5	11–12	14	18	PLT. 10THK	M16x70	36	71
6	13–14	16	18	PLT. 10THK	M16x70	36	71

SIZE	EXIST. BEAM	W mm
A	HEA 100	58
B	HEA 120	66
C	HEA 140	76
D	HEA 160	86
E	HEA 180	96
F	HEA 200	106
	HEA 220	
G	HEA 240	120
	HEA 260	
	HEA 280	
H	HEA 300	126
I	UPN 100	46
	UPN 120	
J	UPN 140	60
K	UPN 200	100
L	IPE 200	64
	IPE 220	
M	IPE 270	70
N	IPE 300	72
O	IPE 600	94
Z	–	0

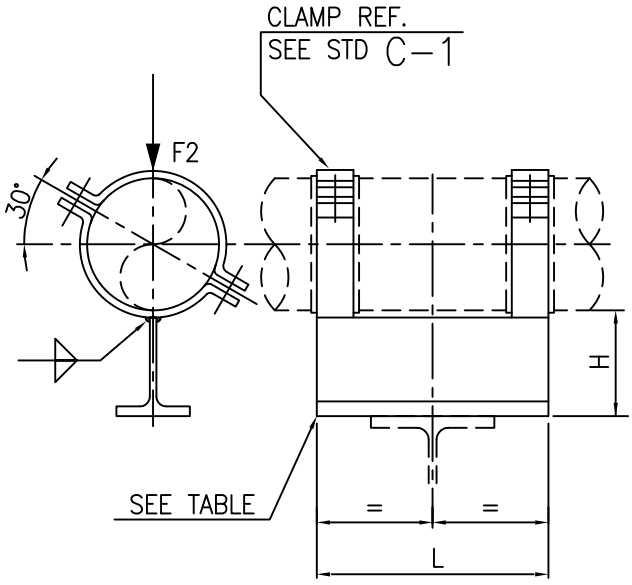
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT ADDICTED TO THE THE "TYPE" SELECTED AND "W" DIMENSION INDICATED.
6– TYPES 1, 3 & 4 SHALL BE USED PREFERABLY WHEN EXISTING BEAMS ARE ANGULARS

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

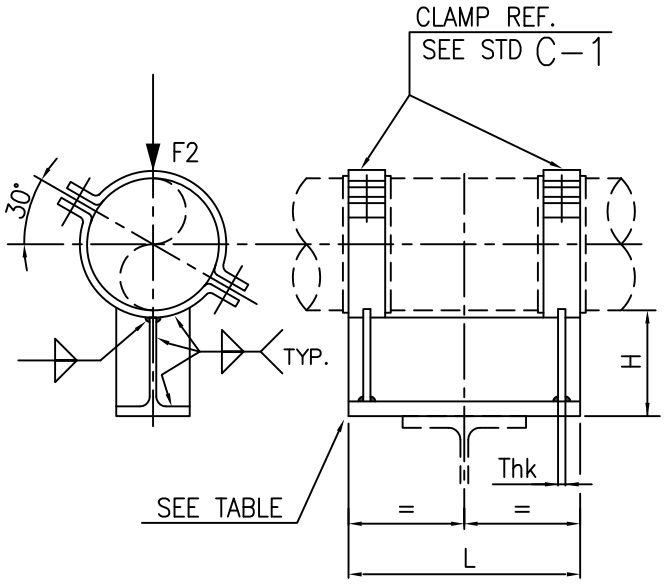
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

Example of designation : STD – PIPE ND" – H – L
(S–64 – 4" – 150 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:

1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	1	**To**	1
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension / Films n.	Thickness	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
1/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**FWN**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**A**
01SS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
2/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
3/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
4/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
5/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
6/1/1/_		**00**	**20-11-2024**	**39**	**AX410**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**04-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					21-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001028	4		Acceptable					04-12-2024			
7/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
8/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
9/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn.	Accept. Date	Spool
9/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**B**
10/1/1/_		**00**	**21-11-2024**	**40**	**AX410**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**04-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					21-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001029	4	Acceptable					04-12-2024			
11/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
12/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
13/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
14/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
15/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
16/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
17/1/1/_		**00**	**21-11-2024**	**40**	**AX410**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**21-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					21-11-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
18/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					20-09-2024			

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
18/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**D**
		RT	FIN	Weld Completion				10 %				Acceptable								
19/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**FWN**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
20/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
21/1/1/_		**00**	**18-09-2024**	**16-31-32**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**21-01-2025**	**E**
					AX84	**After Cutting**														
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
Cut 20-01-2025 Prod sh.32 AX84		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK			Acceptable C1A		GTAW			21-01-2025			
		RT	C 1 DTA	After Cutting				10 %				Acceptable								
22/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
23/1/1/_		**00**	**18-09-2024**	**16**	**AZ35**			**ELB**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**20-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					20-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cons	Accept. Date	Spool
1/1/1/FLOWCELL		**00**	**04-11-2024**	**66**	**AZ39**			**FWN**	**10,00 in**	**4,19 mm**	**V**	**0,857 m**	**P**	**S.S.**	**C1B**	**GTAW+SMAW**	**BW**	**06-11-2024**	
1	VIS	FTP	FIT-UP and on weld			123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				05-11-2024				
	RT	FIN	Weld Completion			IDL-QCI-RT 0036 00	AA	100 %	000844	3	Acceptable				06-11-2024				
2/1/1/FLOWCELL		**00**	**04-11-2024**	**66**	**AZ39**			**FWN**	**10,00 in**	**4,19 mm**	**V**	**0,857 m**	**P**	**S.S.**	**C1B**	**GTAW+SMAW**	**BW**	**06-11-2024**	
1	VIS	FTP	FIT-UP and on weld			123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				05-11-2024				
	RT	FIN	Weld Completion			IDL-QCI-RT 0036 00	AA	100 %	000845	3	Acceptable				06-11-2024				
3/1/1/FLOWCELL		**00**	**04-11-2024**	**66**	**AZ39**			**FWN**	**2,00 in**	**9,27 mm**	**1/2V**	**0,189 m**	**P**	**S.S.**	**C1A**	**GTAW**	**LET**	**06-11-2024**	
1	VIS	FTP	FIT-UP and on weld			123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				05-11-2024				
	LP	FIN	Weld Completion			IDL-QCI-LP 0002 01	BV	100 %	000039		Acceptable				06-11-2024				
4/1/1/FLOWCELL		**00**	**04-11-2024**	**66**	**AZ39**			**FWN**	**2,00 in**	**9,27 mm**	**1/2V**	**0,189 m**	**P**	**S.S.**	**C1A**	**GTAW**	**LET**	**06-11-2024**	
1	VIS	FTP	FIT-UP and on weld			123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				05-11-2024				
	LP	FIN	Weld Completion			IDL-QCI-LP 0002 01	BV	100 %	000040		Acceptable				06-11-2024				
5/1/1/FLOWCELL		**00**	**04-11-2024**	**66**	**AZ39**			**PL**	**142,00 mm**	**3,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**06-11-2024**	
1	VIS	FTP	FIT-UP and on weld			123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				05-11-2024				
	LP	FIN	Weld Completion			IDL-QCI-LP 0002 01	BV	100 %	000041		Acceptable				06-11-2024				

Totals per DWG	**1**	**Prefabrication**	**4,15 m**	**25 Nr. Welds**	**44,00 inch**
		Erection	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Accepted	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**4,15 m**	**25 Nr. Welds**	**44,00 inch**
		Erection	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Accepted	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**4,15 m**	**25 Nr. Welds**	**44,00 inch**
		Erection	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Accepted	**4,45 m**	**28 Nr. Welds**	**47,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

CROSSWIND / ROSETTI MARINO	Cliente/Contractor	CROSSWIND	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
	SubContrattista/SubContractor	ROSETTIMARINO/GROUPOFCOMPANY	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
	Progetto/Project	Hollandse Kust Noord Wind Park Project			
	Commessa/Job	123A90 - Piping			
	Disciplina/Discipline	PIPING			
	TitoloDocumento/DocumentTitle	Material Traceability Report	StatoDocumento/Document Status:		Data/Date: 06/12/2024
	RosettiDoc.Num.	123A90MTR001			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
1	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
1	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W3-W4	
1	00	1	A	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W5	
1	00	1	A	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W1	
1	00	1	A	01SS	1A	2,177	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	A	01SS	1B	0,174	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	B	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W7-W8	
1	00	1	B	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W9	
1	00	1	B	01SS	1C	2,594	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	B	01SS	1D	0,412	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W12-W13	
1	00	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W14-W15	
1	00	1	C	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W16	
1	00	1	C	01SS	1E	6	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	C	01SS	1F	1,839	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	C	01SS	1G	1,223	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	C	01SS	1H	1,022	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	D	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W18	
1	00	1	D	01SS	1I	0,695	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	E	01SS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W19-W20	
1	00	1	E	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W19	
1	00	1	E	01SS	3	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W21	
1	00	1	E	01SS	7	1	45 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	E62123	1724000839	00230	MC-TYF-6-20080627118	W22-W23	
1	00	1	E	01SS	1J	0,103	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
1	00	1	E	01SS	1K	0,147	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line – NOT APPLICABLE

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006			Dwg	123A90-DDL-PR-PID-80011-24
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10003276		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

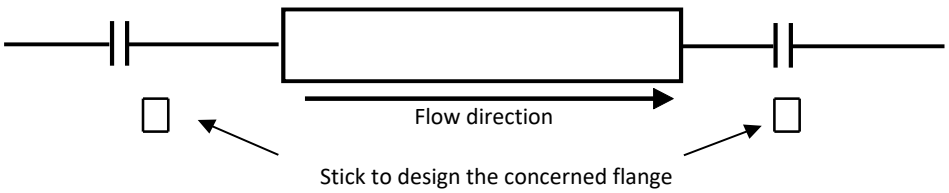
1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA
5	Valve body cavity, branches, etc.. Have been drained form residual water	●
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-02-04	2025-02-04	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-04T05:28:54.586Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-04T08:51:51.439Z	

ITEM	Tag	001-1-J1	: Joint 001-1-J1			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004171		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



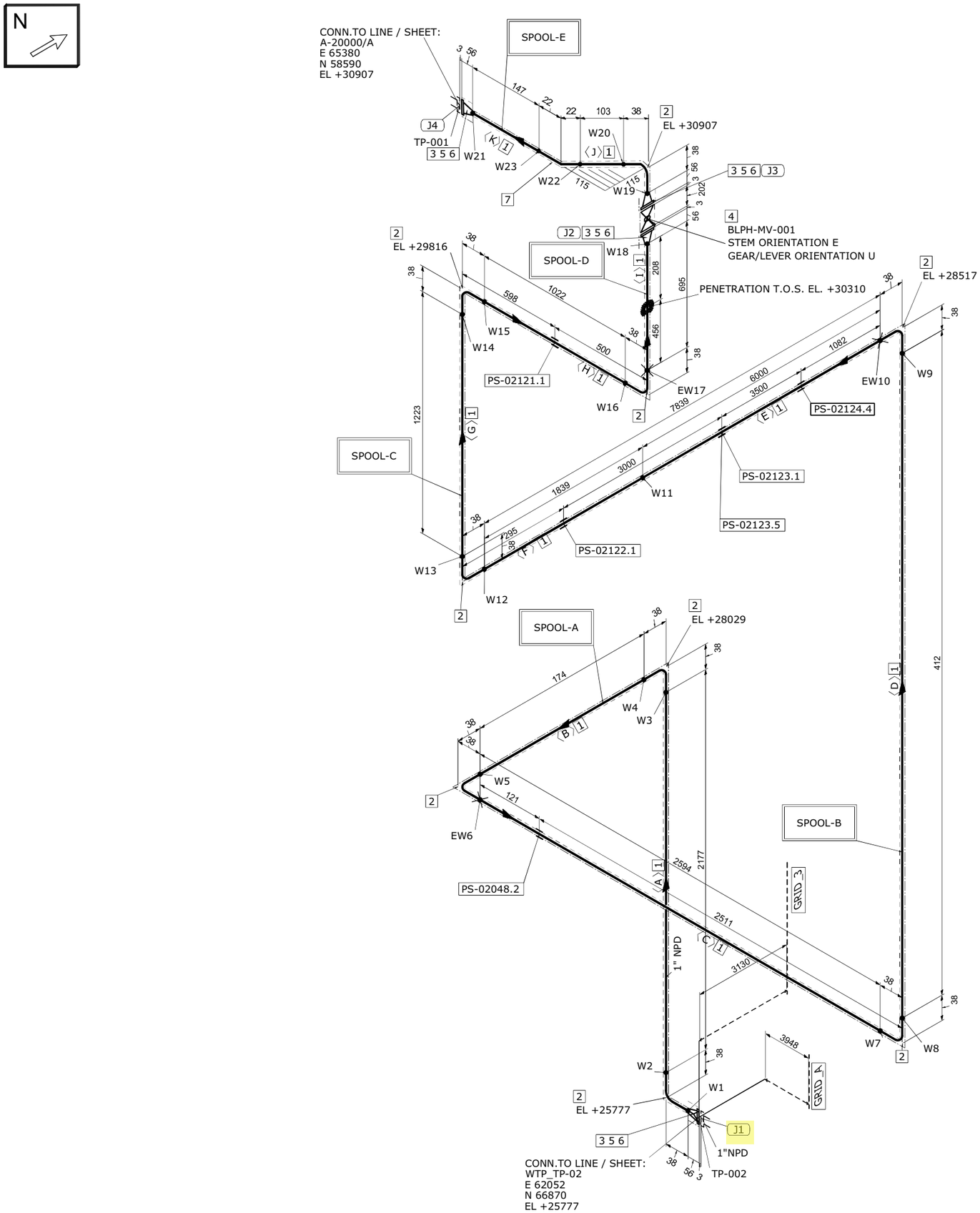
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-18	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:23:42.561Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-18T16:16:36.084Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

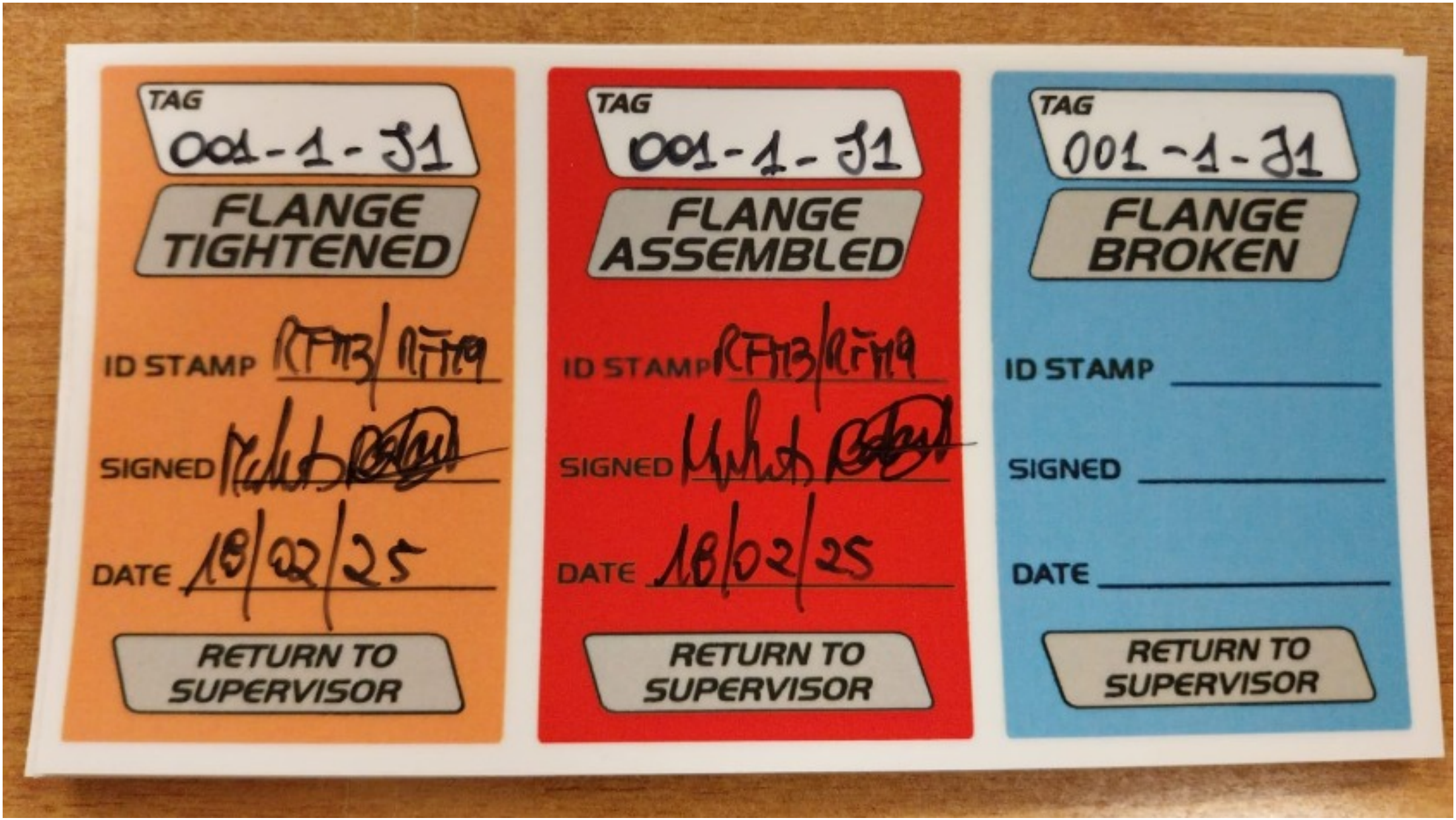
LINE DATA									
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]		
HEAT TRACING	Yes		TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

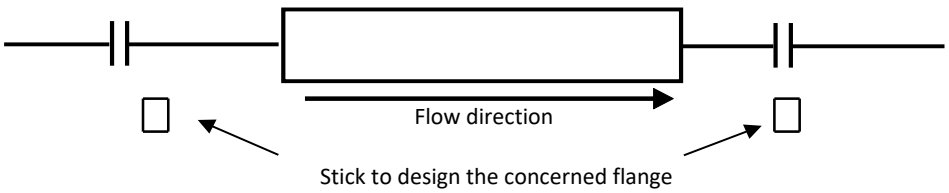
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00001		SHEET / OF 1/1	REV. 00


TAG
001-1-J1
FLANGE TIGHTENED
ID STAMP RFH13/RH19
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
001-1-J1
FLANGE ASSEMBLED
ID STAMP RFH13/RH19
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
001-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	001-1-J2	: Joint 001-1-J2			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004172		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



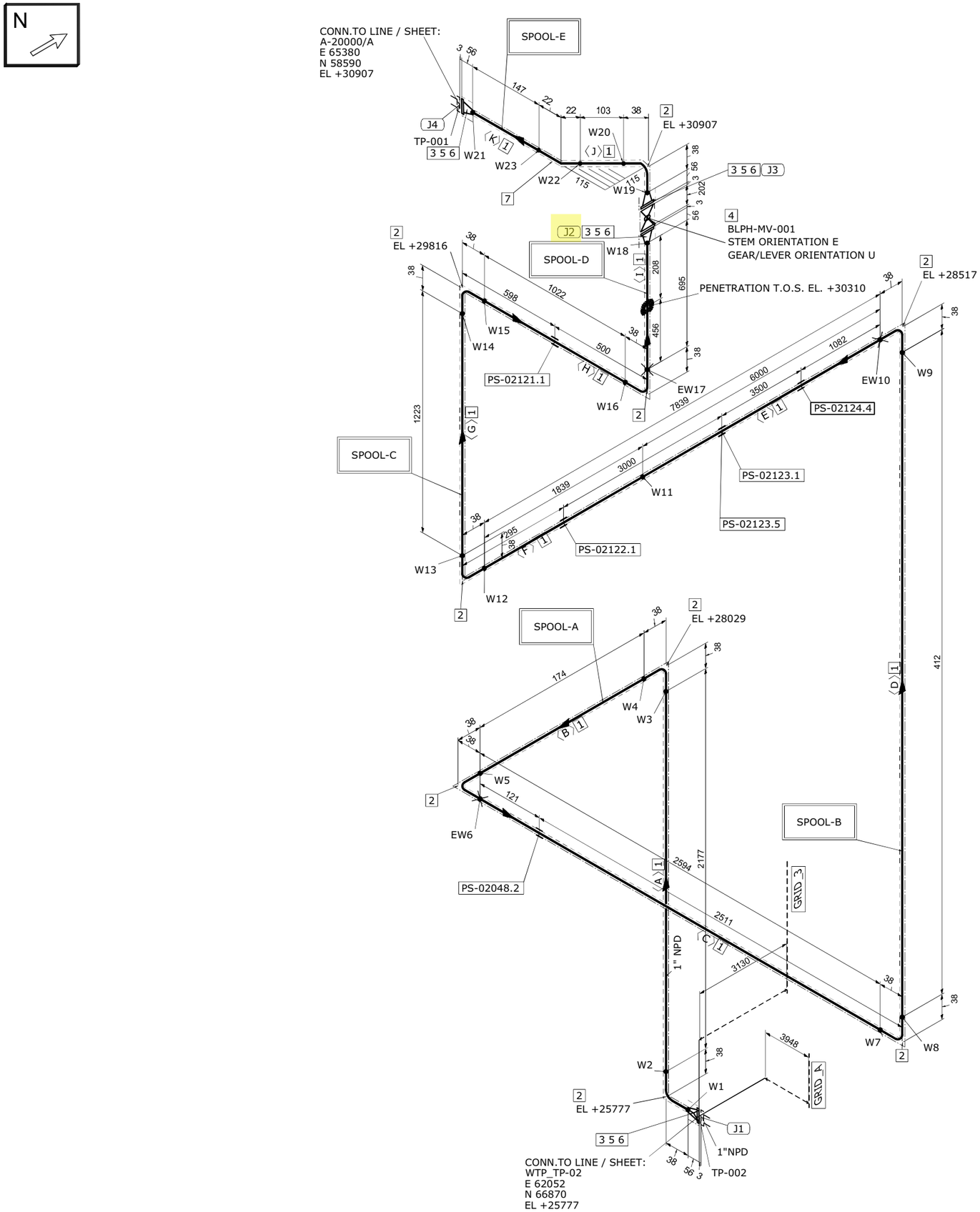
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:23:58.289Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-14T15:41:59.052Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

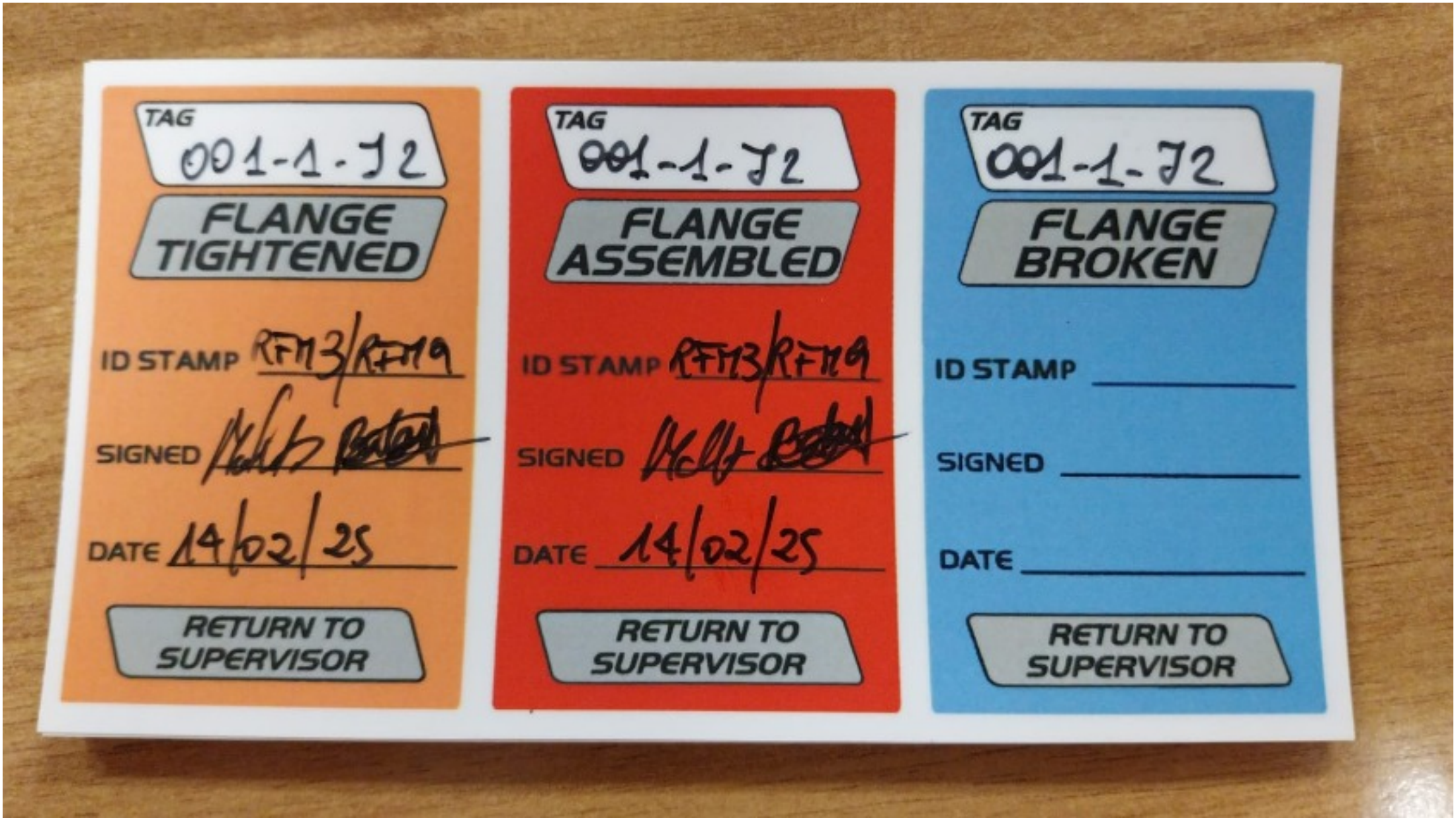
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NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]	
HEAT TRACING	Yes			TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

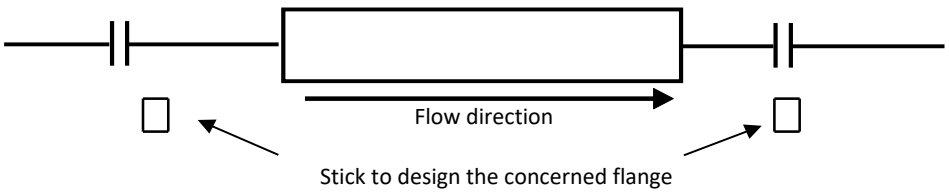
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00001	SHEET / OF 1/1	REV. 00


TAG
001-1-J2
FLANGE TIGHTENED
ID STAMP RFM3/RFM9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J2
FLANGE ASSEMBLED
ID STAMP RFM3/RFM9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	001-1-J3	: Joint 001-1-J3			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004173		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

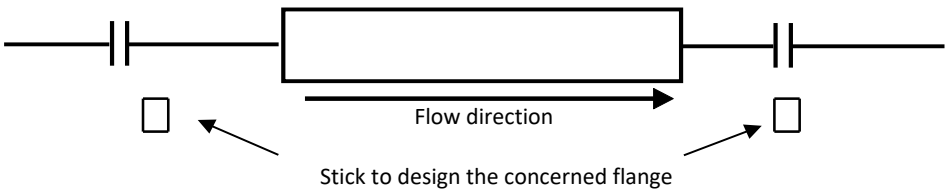
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-03-06	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-06T15:19:23.327Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:34:28.573Z	


TAG
001-1-J3
FLANGE TIGHTENED
ID STAMP RFM3/RFM9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE ASSEMBLED
ID STAMP RFM3/RFM9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE TIGHTENED
ID STAMP RFM2
SIGNED Selim
DATE 05/03/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE ASSEMBLED
ID STAMP RFM2
SIGNED Selim
DATE 05/03/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE BROKEN
ID STAMP RFM2
SIGNED Selim
DATE 05/03/25
RETURN TO SUPERVISOR

ITEM	Tag	001-1-J3	: Joint 001-1-J3			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004173	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



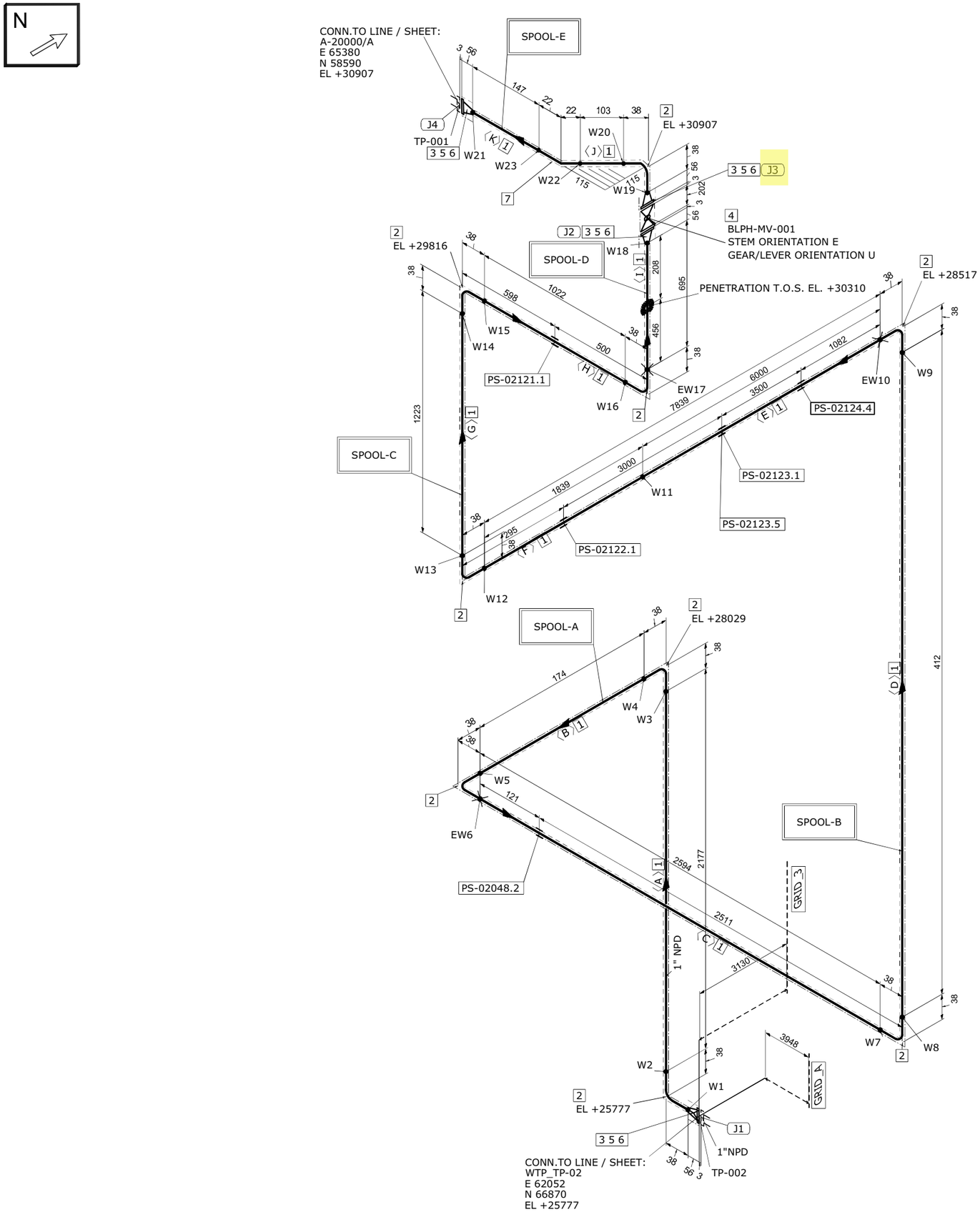
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:24:12.111Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-14T15:41:49.841Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

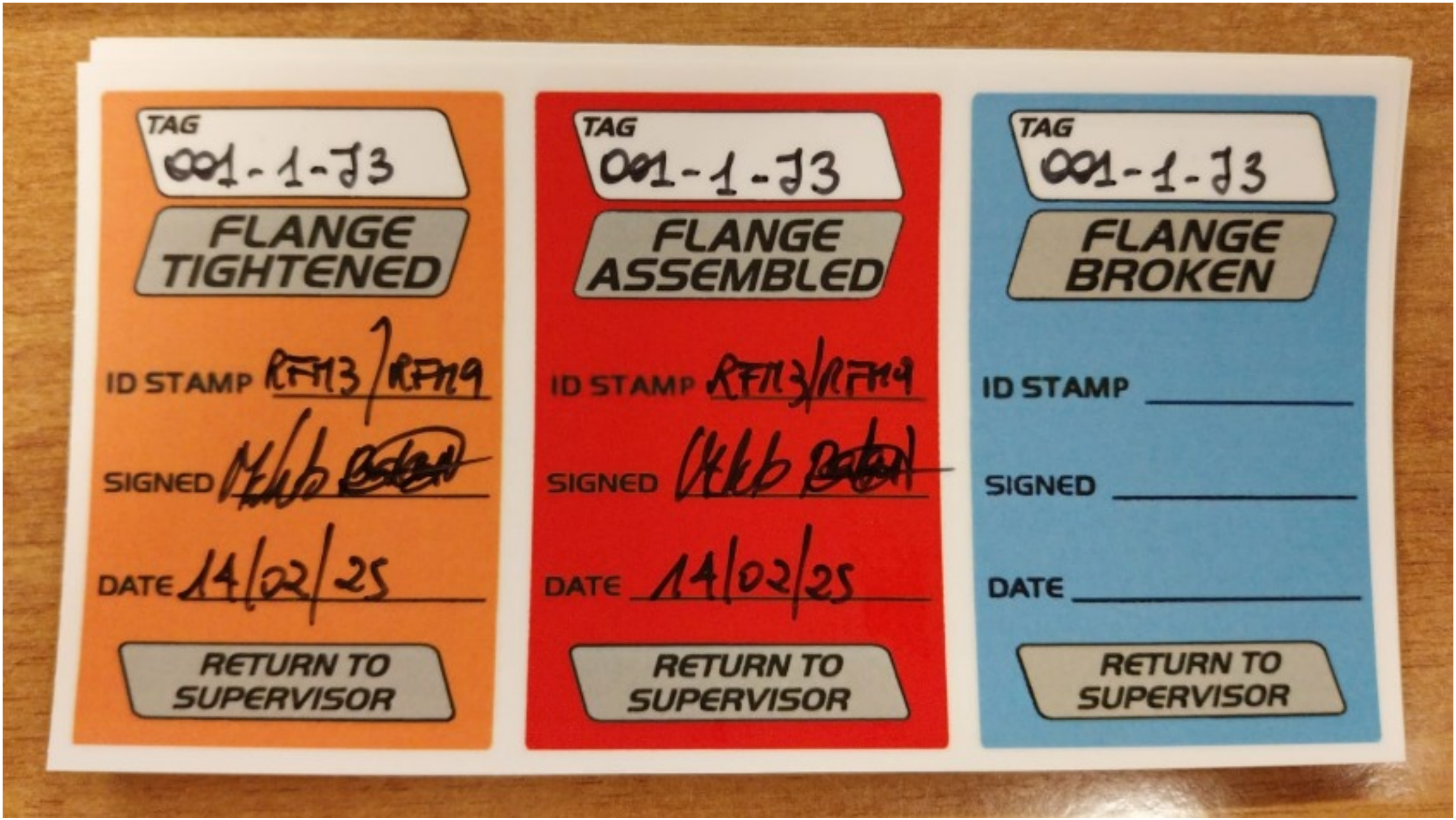
LINE DATA									
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6 [barg]	TEMP. -29 / 100 [°C]				
HEAT TRACING	Yes		TEST	PRESS. 9 [barg]	TEMP. AMB	MEDIUM Water			

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

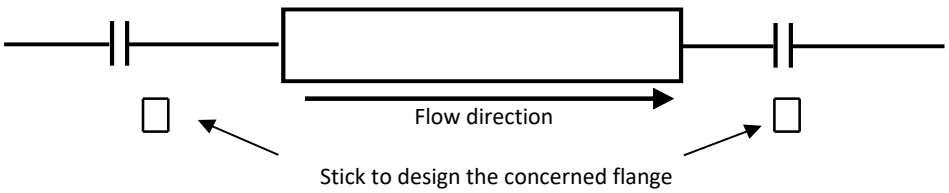
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00001	SHEET / OF 1/1	REV. 00


TAG
001-1-J3
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	001-1-J4	: Joint 001-1-J4			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004174		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-03-06	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-06T15:19:35.452Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:34:36.830Z	



TAG 001-1-J4

FLANGE TIGHTENED

ID STAMP RFH3/RFH9

SIGNED [signature]

DATE 14/02/25

RETURN TO SUPERVISOR

TAG 001-1-J4

FLANGE ASSEMBLED

ID STAMP RFH3/RFH9

SIGNED [signature]

DATE 14/02/25

RETURN TO SUPERVISOR

TAG 001-1-J4

FLANGE BROKEN

ID STAMP

SIGNED

DATE

RETURN TO SUPERVISOR

TAG 001-1-J4

FLANGE TIGHTENED

ID STAMP RFH2

SIGNED [signature]

DATE 05/03/25

RETURN TO SUPERVISOR

TAG 001-1-J4

FLANGE ASSEMBLED

ID STAMP RFH2

SIGNED [signature]

DATE 05/03/25

RETURN TO SUPERVISOR

TAG 001-1-J4

FLANGE BROKEN

ID STAMP RFH2

SIGNED [signature]

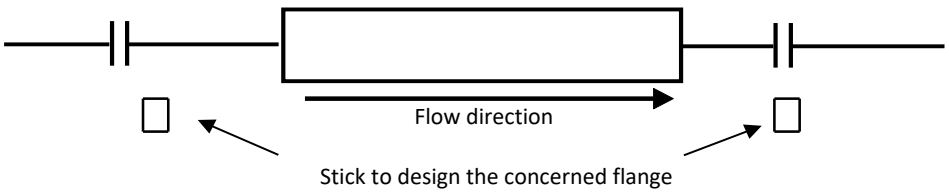
DATE 05/03/25

RETURN TO SUPERVISOR

ITEM	Tag	001-1-J4	: Joint 001-1-J4			Dwg	123A90-FDL-PP-DI-00001-01
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004174		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-006

EQUIPMENT TAG



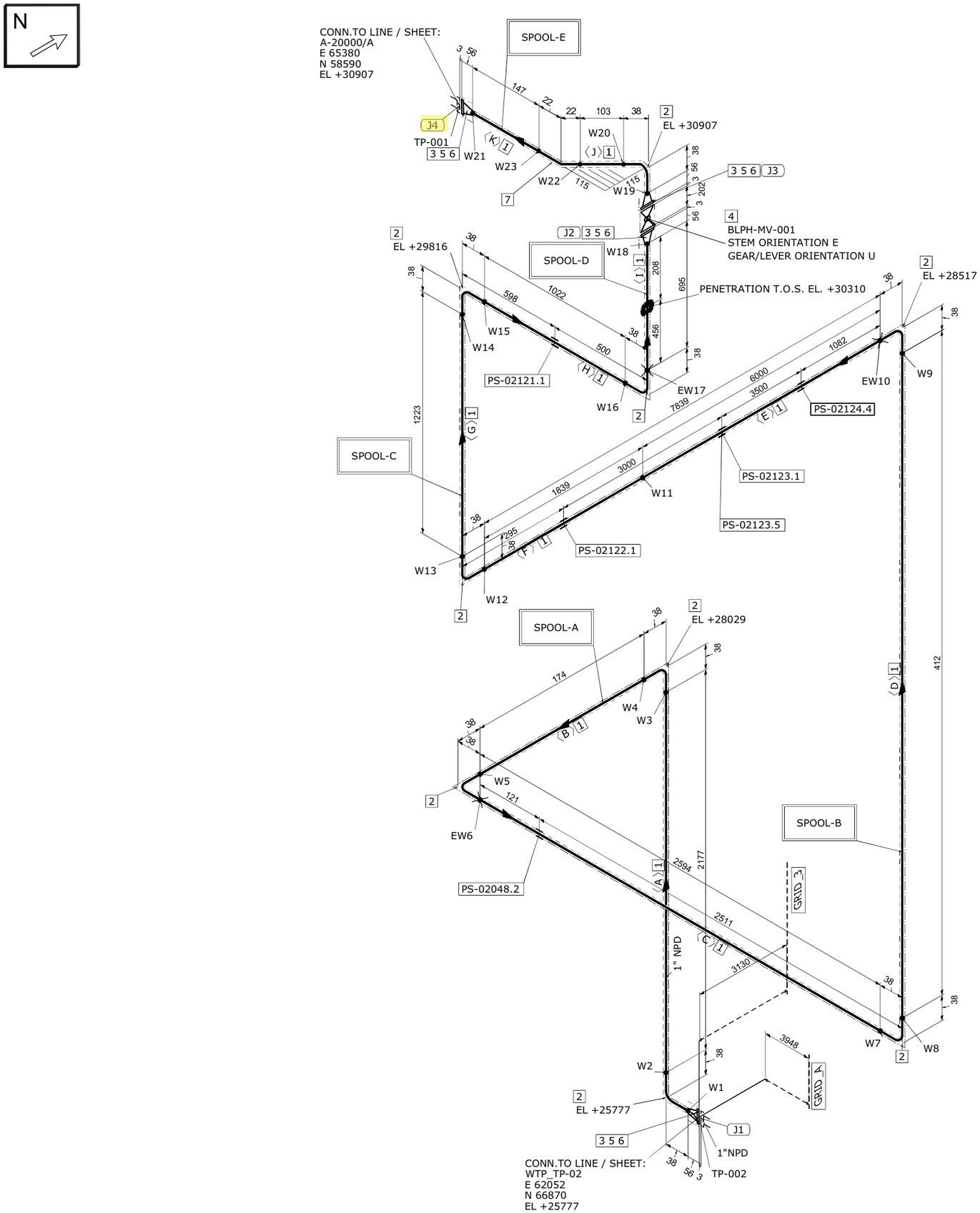
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:24:28.608Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-14T15:41:44.839Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.5
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	9	1.3
3	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	4	5.7
7	1	E45RSS00860100	45 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01410100	Block & Bleed Valve API 6D FLG 150LB RF BS01C01RFS	1	12.5
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
6	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	48.6
ERECTION WEIGHT [kg]	14.6
OVERALL WEIGHT [kg]	63.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
W23	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	2177	BEVEL	BEVEL
B	1	174	BEVEL	BEVEL
C	1	2594	BEVEL	BEVEL
D	1	412	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	1839	BEVEL	BEVEL
G	1	1223	BEVEL	BEVEL
H	1	1022	BEVEL	BEVEL
I	1	695	BEVEL	BEVEL
J	1	103	BEVEL	BEVEL
K	1	147	BEVEL	BEVEL

SUPPORT LIST

PS-02048.2
PS-02124.4
PS-02123.5
PS-02123.1
PS-02122.1
PS-02121.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	5	7.8
B	3	7.9
C	5	26.0
D	1	3.1
E	5	3.7
MONT	3	14.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-001-01SS-E

SK.001

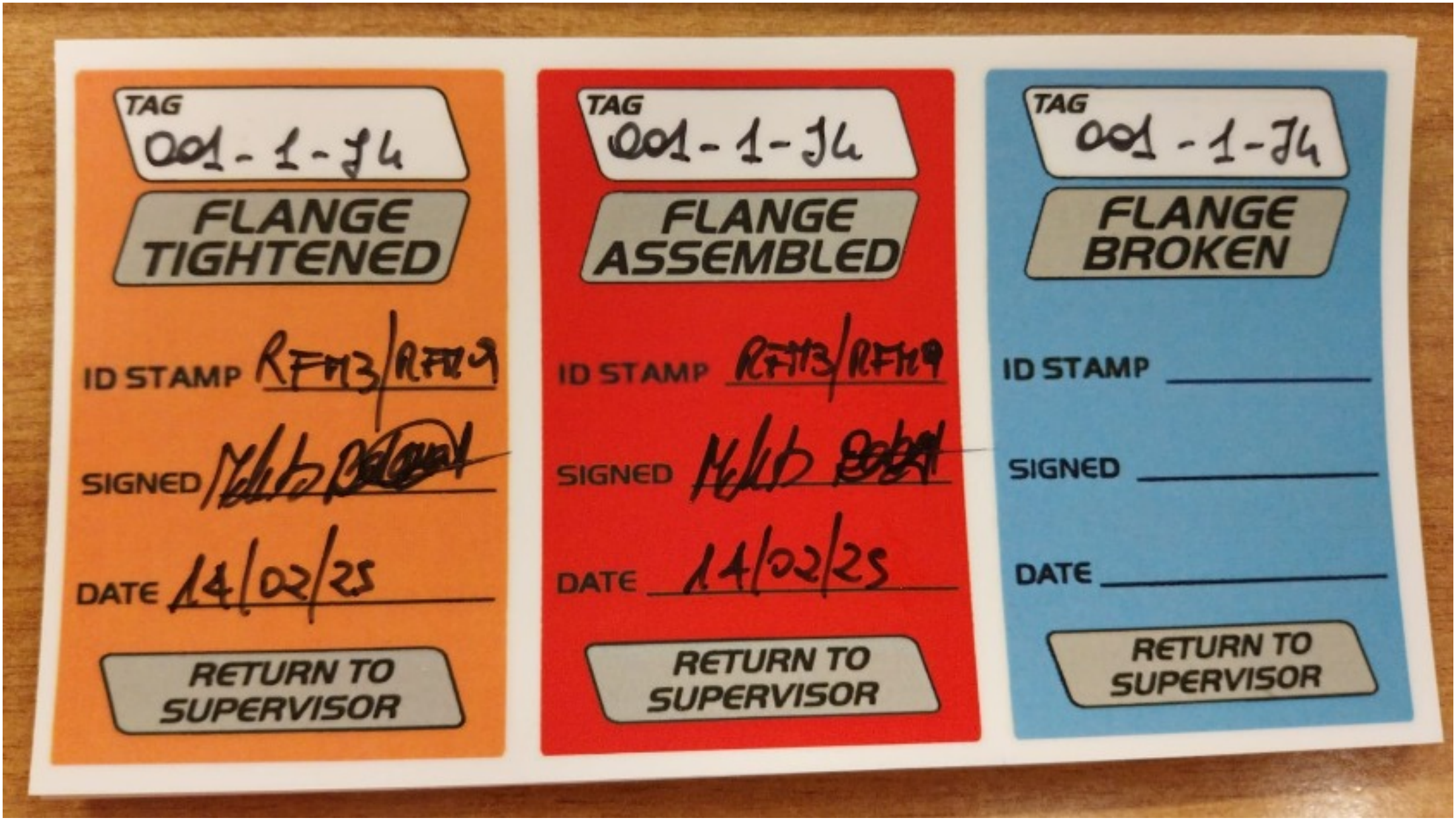
LINE DATA									
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -29 / 100	[°C]	
HEAT TRACING	Yes			TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM	Water

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00001	SHEET / OF 1/1	REV. 00


TAG
001-1-J4
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J4
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
001-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	50-10-TP-006	: Test Pack 50-10-TP-006			Dwg	123A90-DDL-PR-PID-80011-24
	S/Sys	50-10	: Water Desalination Package & Distribution			Module	LD
TASK	code	C10004929		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	Note
3	Check that the fluid direction is correct.	Note
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

1. Checked the painting report made by Vendor and signed by RM coating Dpt.
Line had to be bare. Painted by mistake bvut with correct cycle for the line type. Painting dpt. and Engineering approved the change.
Points 2 and 3 to be checked after thermal insulation.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (Rosetti Marino)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-25	2025-02-25	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-25T16:40:04.357Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-25T16:55:29.082Z	

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

ROSETTI MARINO	**INSPECTION REPORT**	**Report No**. IR-PSC-448-01	SHEET 1 di 4
		Data *Date 29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* PSC
FORNITORE *Supplier: PSC*	**No. Ordine** *P.O. No.* **1724000448**	**OGGETTO** *Object water treatment package -* **Local Control Panel**	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
-	1	PLC / MCC Cabinet	50-LP-001	Visual Check & FAT (patial)	**Satisfactory (partial)**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
LCP FAT REPORT	PK2885-Q-013	00	-
LCP FAT PROCEDURE	PK2885-Q-012	00	-
GENERAL ARRANGEMENTS	1724000448-IN-SDG-00014	02	IFI
INSPCETION TEST PLAN	CW-I-WPA-2023-05	02	16/09/2024

Remarks:

DISTRIBUZIONE A: / *Distribution to:*

☒**GESTIONE FORNITURE** / *Supply Management Department*	☒**CAPO COMMESSA** / *Project Manager*
☒**PRODUZIONE** / *Production*	☒**FORNITORE** / *Supplier*
☒**PPLM** */ Project Procurement & Logistic Manager*	☒**P.Q.M.**
☒**MAGAZZINO** / *Warehouse*	☒**P.E.M.**

ATTIVITA' ESEGUITE / *Activities Carried Out*

A - INTRODUZIONE / *Preliminary Introduction*

The present report refers to the inspection visit carried on 16/10/2024 at PSC factory, located in MILAN , ITALY
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi) and in accordance with ITP and Factory acceptance test procedure
Attendees the test:

Alessandro Fusconi (Rosetti Marino)
Roberto Mussi (PSC)
Matteo Stiroli (PSC)

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO Fusconi A.		

ROSETTI MARINO	**INSPECTION REPORT**	**Report No**. IR-PSC-448-01	SHEET 2 di 4
		Data *Date 29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* PSC
FORNITORE *Supplier: PSC*	**No. Ordine** *P.O. No.* **1724000448**	**OGGETTO** *Object water treatment package -* **Local Control Panel**	

Fabio Cambiaghi (PSC)
Pignatelli L. (CPY)

Area of concern
None

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO** / *Result*
50-LP-001 - Visual & dimensional check - Functional Check - Electrical Check - Painting Check - Nameplate tag check	**Satisfactory with Punch List**

C –DETTAGLIO DEGLI STRUMENTI UTILIZZATI PER TEST E ISPEZIONE / *Details of Inspection and Test Instruments used*

NOME DELLO STRUMENTO *Equipment name*	**PRODUTTORE** *Manufacturer*	**MODELLO** *Model*	**PROSSIMA TARATURA** *Next calibration*
*	*	*	*

Remarks

*all instruments used during FAT are listed as per attached document PK2885-Q-013.pdf

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
*	*	*	*

Remarks:
*all attachments are indicated below:

- PK2885-A-002.pdf
- PK2885-Q-001 Sh33.pdf
- PK2885-Q-013.pdf

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO Fusconi A.		

ROSETTI MARINO	**INSPECTION REPORT**	**Report No**. IR-PSC-448-01	SHEET 3 di 4
		Data *Date* 29/10/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* PSC
FORNITORE *Supplier:* *PSC*	**No. Ordine** *P.O. No.* **1724000448**	**OGGETTO** *Object* *water treatment package* - **Local Control Panel**	

E – DETTAGLI ED ESITO DELL'ISPEZIONE / *Details and Results of Inspection*

All details has been highlighted in the test reports

F – CONCLUSIONI / *Conclusions*

Fat for 50-LP-001 has been partially completed successfully with Punch Lists.
During FAT has been created a Master Copy of documents with all red marked up in order to create a pictures for construction and commission team.

G – PUNTI IRRISOLTI / *Outstanding points*

Punch_List are mentionated at page 7of33 doc. PK2885-Q-013.

#PL1 Doc. Ref. "PK2885" Up-date as per RLMU performed.
#PL2 Shield Bar (cabinet n.5) will be modify as per as per verbal agreements (bar must be raised in height).
#PL3 Top plate will be replace with the final one. As per drawing " PK2885-A-002".

H – STATO PACKING LIST / *Packing List Status*	☐ **EMESSO** / *Issued*	☒ **NON EMESSO** / *Not Issued*	DD/MM/YYYY **ULTIMA DATA UTILE** / *Last Date*

PUNCH LIST REPORT: VEDI ALLEGATO N° / *Refer to Attachment n° NOT APPLICABLE*

REPORT FOTOGRAFICO (SE PRESENTE) / *Digital Pictures (if any)*





L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO Fusconi A.		

ROSETTI MARINO	**INSPECTION REPORT**	**Report No**. IR-PSC-448-01	SHEET 4 di 4
		Data *Date 29/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA** / *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* PSC
FORNITORE *Supplier: PSC*	**No. Ordine** *P.O. No.* **1724000448**	**OGGETTO** *Object water treatment package -* **Local Control Panel**	

NON VALIDO PER IL RILASCIO DELLA FORNITURA / *It is not valid for the supply's release*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO Fusconi A.		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE