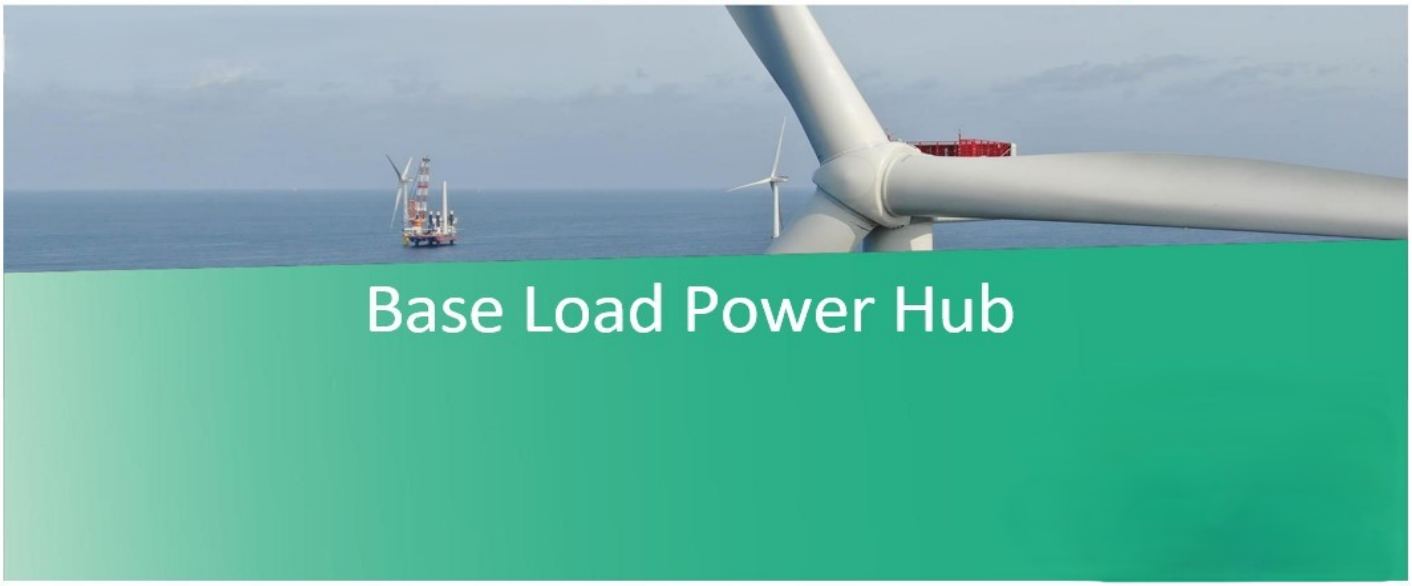
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	99 Miscellaneous System
SUBSYSTEM	99-00 Crane

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

Sub System N°:	99-00	Tick as appropriate	ONSHORE	O
Description:	Crane		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*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	NA
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	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:	1		Issued on:	2025-04-03	
System:	99	/	Miscellaneous System		
SubSystem:	99-00	/	Crane		

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: 2	B: 6

REMARKS: With reference to Punch items C30004312 & C00004313 raised during the 3P-WD, Contractor states that there is no issue for safety consequently to energise and test the equipment together with vendor site engineers.
These punch items shall be closed before preparation of RFO certificate.

	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	2025-04-07	2025-04-05	2025-04-07	2025-04-07
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-04-07T06:57:53.774Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-04-05T07:06:31.606Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:25:06.436Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:25:11.041Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 99-00 & process: MC

Electrical	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83020-CEL	LV Switchgear / Crane	ONSHORE	C10000541	CPX09	100	2025-01-21	RFC 1
JB-200E3	Davit crane JB	ONSHORE	C10001224	CPX31	100	2025-04-03	RFC 1
X-99001	Lifting Davit	ONSHORE	C10002360	CZX01E	100	2025-04-03	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 99-00 & process: MC

Instrumental	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
X-99001	Lifting Davit	ONSHORE	C10002361	CZX01I	100	2025-04-03	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 99-00 & process: MC

Mechanical	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
X-99001	Lifting Davit	ONSHORE	C10002362	CZX01M	100	2025-02-17	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	99	Miscellaneous System
SUBSYSTEM	99-00	Crane

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003860	A	X-99001 C10002362	Earthing system not connected.	.		KAlbonetti 2025-02-17	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30003791	B	X-99001 C10002362	Several touch-ups to be made.	.		KAlbonetti 2025-02-13			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	99	Miscellaneous System
SUBSYSTEM	99-00	Crane

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004312	A	X-99001 C10002360	Missing on all cablegland the star washer and the teflhon washer. See attached photo.	.		Gtangianu 2025-04-03			
C30004313	A	X-99001 C10002360	The internal cables need to be better dressed , Is short The power cable from 50D1 to motor.See attached photo.	.		Gtangianu 2025-04-03			
C30000119	B	A3/+04-QF1 C10002922	New and definitive protection setting to be implemented on SG-200N1 drawer A3/+04.	Update the protection study on the drawer.		MGirotti 2024-10-01	2024-11-21	MGirotti 2024-11-21	2024-11-21
C30003139	B	83020-CEL C10000541	Bending radius to be arranged better on the MCT on the floor , near the Panel Crane- JB-200E3. See the attached photo.	.		Gtangianu 2025-01-21	2025-03-04	JKrizanic 2025-03-04	2025-03-04
C30003144	B	83020-CEL C10000541	Missing all SS cable tags on all cable routing. (inside control cabinet)	.		Gtangianu 2025-01-22			
C30004301	B	83020-CEL C10000541	Missing identification cable wire insde the panel DP-200N1. See attached photo.	.		Gtangianu 2025-03-31			
C30004314	B	X-99001 C10002360	The profibus cable is not connected. See attached photo.	.		Gtangianu 2025-04-03			
C30004316	B	X-99001 C10002360	All Exstenal cable tags by Vendor is in plastic .Need to change to SS type. See attached photo.	.		Gtangianu 2025-04-03			
C30004317	B	X-99001 C10002360	Vendor Crain wiring Diagram(1724001010-MAC-DG-00012_Rev.3) is not alligned with internal Panel. Documentation to be	.		Gtangianu 2025-04-03			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	99	Miscellaneous System
SUBSYSTEM	99-00	Crane

Mechanical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003860	A	X-99001 C10002362	Earthing system not connected.	.		KAlbonetti 2025-02-17	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30003791	B	X-99001 C10002362	Several touch-ups to be made.	.		KAlbonetti 2025-02-13			

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 99 Miscellaneous System

SUBSYSTEM 99-00 Crane

Electrical

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004312	A	X-99001 C10002360	Missing on all cablegland the star washer and the teflhon washer. See attached photo.	.		Gtangianu 2025-04-03			
C30004313	A	X-99001 C10002360	The internal cables need to be better dressed , Is short The power cable from 50D1 to motor.See attached photo.	.		Gtangianu 2025-04-03			
C30000119	B	A3/+04-QF1 C10002922	New and definitive protection setting to be implemented on SG-200N1 drawer A3/+04.	Update the protection study on the drawer.		MGirotti 2024-10-01	2024-11-21	MGirotti 2024-11-21	2024-11-21
C30003139	B	83020-CEL C10000541	Bending radius to be arranged better on the MCT on the floor , near the Panel Crane- JB-200E3. See the attached photo.	.		Gtangianu 2025-01-21	2025-03-04	JKrizanic 2025-03-04	2025-03-04
C30003144	B	83020-CEL C10000541	Missing all SS cable tags on all cable routing. (inside control cabinet)	.		Gtangianu 2025-01-22			
C30004301	B	83020-CEL C10000541	Missing identification cable wire insde the panel DP-200N1. See attached photo.	.		Gtangianu 2025-03-31			
C30004314	B	X-99001 C10002360	The profibus cable is not connected. See attached photo.	.		Gtangianu 2025-04-03			
C30004316	B	X-99001 C10002360	All Exstenal cable tags by Vendor is in plastic .Need to change to SS type. See attached photo.	.		Gtangianu 2025-04-03			
C30004317	B	X-99001 C10002360	Vendor Crane wiring Diagram(1724001010-MAC-DG-00012_Rev.3) is not alligned with internal Panel. Documentation to be	.		Gtangianu 2025-04-03			

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003144

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000541	1.4 Discipline	Electrical
1.2 Item	83020-CEL	LV Switchgear / Crane	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Missing all SS cable tags on all cable routing. (inside control cabinet)

Name: Giovanni Tangianu

Date: 2025-01-22

Signature: Digitaly signed by Giovanni Tangianu 2025-01-22T10:26:16.994Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-22
3.5 Action by	PRE-COMM	Signature	Digitaly signed by Giovanni Tangianu 2025-01-22T10:27:10.311Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003791

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002362	1.4 Discipline	Mechanical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Several touch-ups to be made.

Name: Kangi Albonetti

Date: 2025-02-13

Signature: Digitaly signed by Kangi Albonetti 2025-02-13T13:45:27.975Z

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	2025-02-13
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Kangi Albonetti 2025-02-13T13:45:48.467Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature




The Novacel Solution
for LASER Fiber & CO_2



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004301

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000541	1.4 Discipline	Electrical
1.2 Item	83020-CEL	LV Switchgear / Crane	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Missing identification cable wire insde the panel DP-200N1. See attached photo.

Name: Giovanni Tangianu

Date: 2025-03-31

Signature: Digitaly signed by Giovanni Tangianu 2025-03-31T08:43:52.323Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-31
3.5 Action by	PRE-COMM	Signature	Digitaly signed by Giovanni Tangianu 2025-03-31T08:44:02.981Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

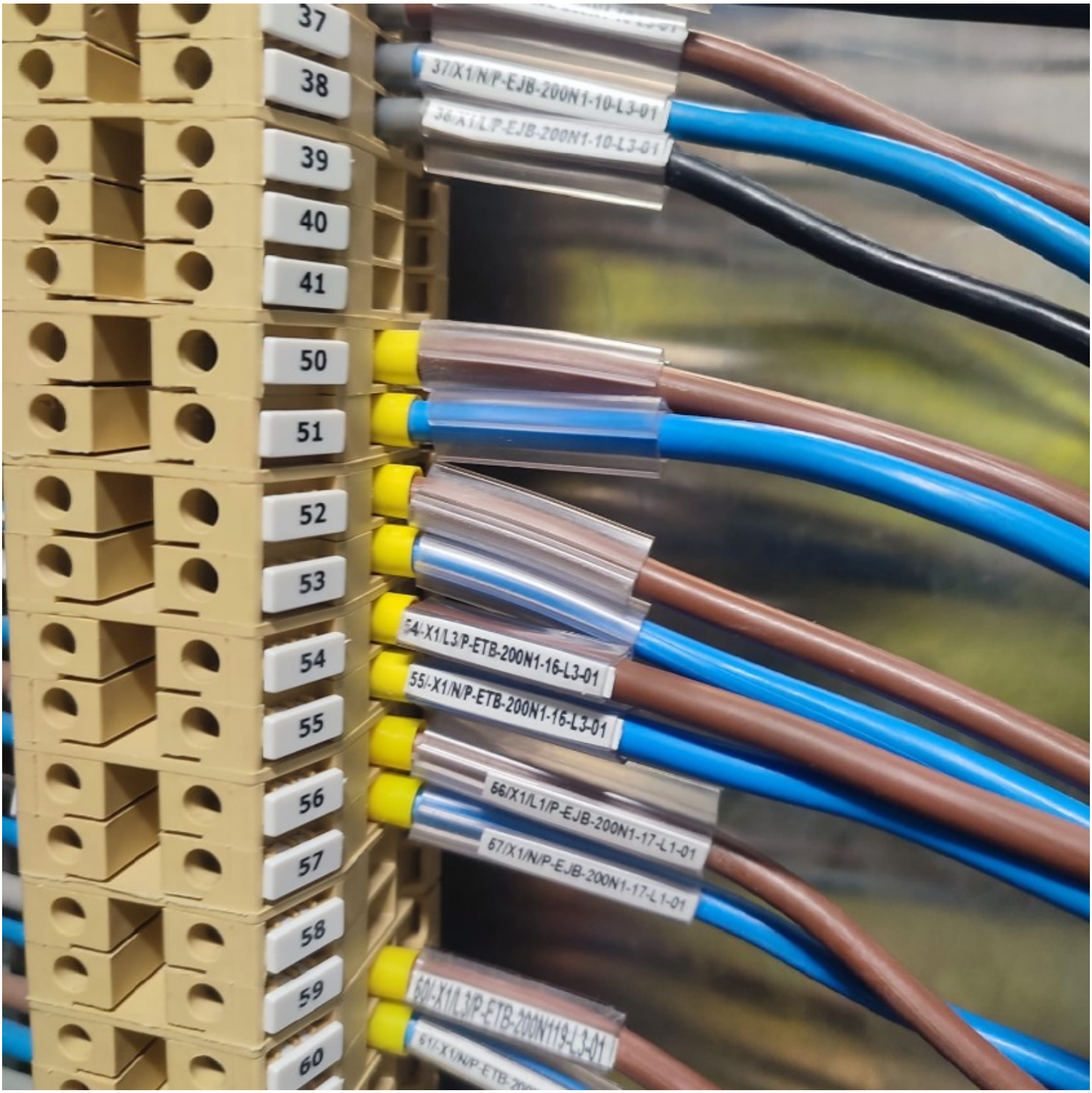
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


37
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37/X1/N/P-EJB-200N1-10-L3-01
54/-X1/L3/P-ETB-200N1-16-L3-01
55/-X1/N/P-ETB-200N1-16-L3-01
66/X1/L1/P-EJB-200N1-17-L1-01
67/X1/N/P-EJB-200N1-17-L1-01

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004312

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002360	1.4 Discipline	Electrical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Missing on all cablegland the star washer and the teflhon washer.
See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-03

Signature: Digitaly signed by Giovanni Tangianu 2025-04-03T12:43:28.975Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2025-04-03T12:43:52.928Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

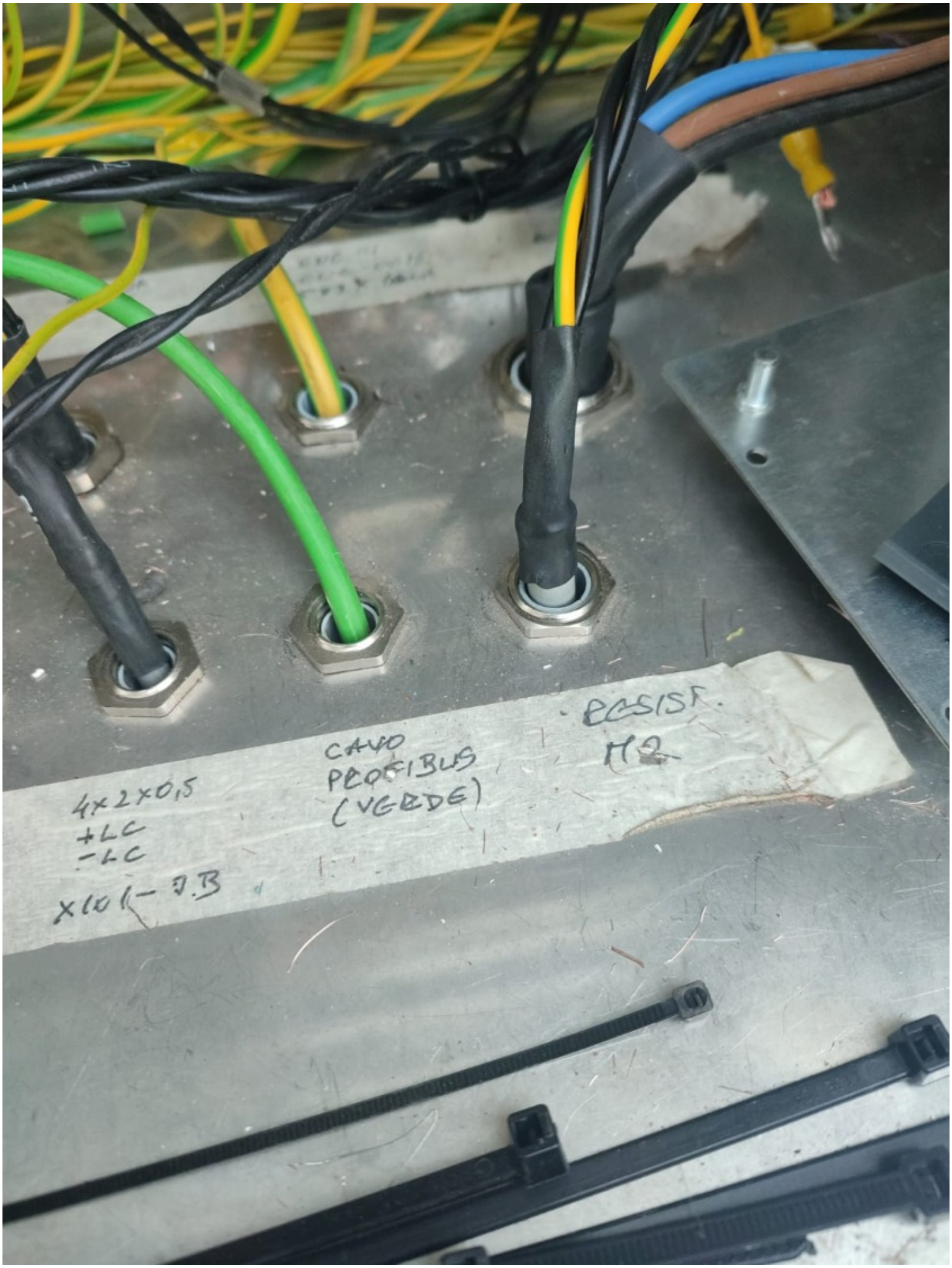
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


4x2x0,5
+LC
-LC
X101 - J.B
CAVO
PROFIBUS
(VERDE)
EASIST.
M2


PTC M1


M2 BRAKE
PTC M1

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004313

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002360	1.4 Discipline	Electrical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

The internal cables need to be better dressed , Is short The power cable from 50D1 to motor.See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-03

Signature: Digitaly signed by Giovanni Tangianu 2025-04-03T12:57:37.517Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2025-04-03T12:58:02.375Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

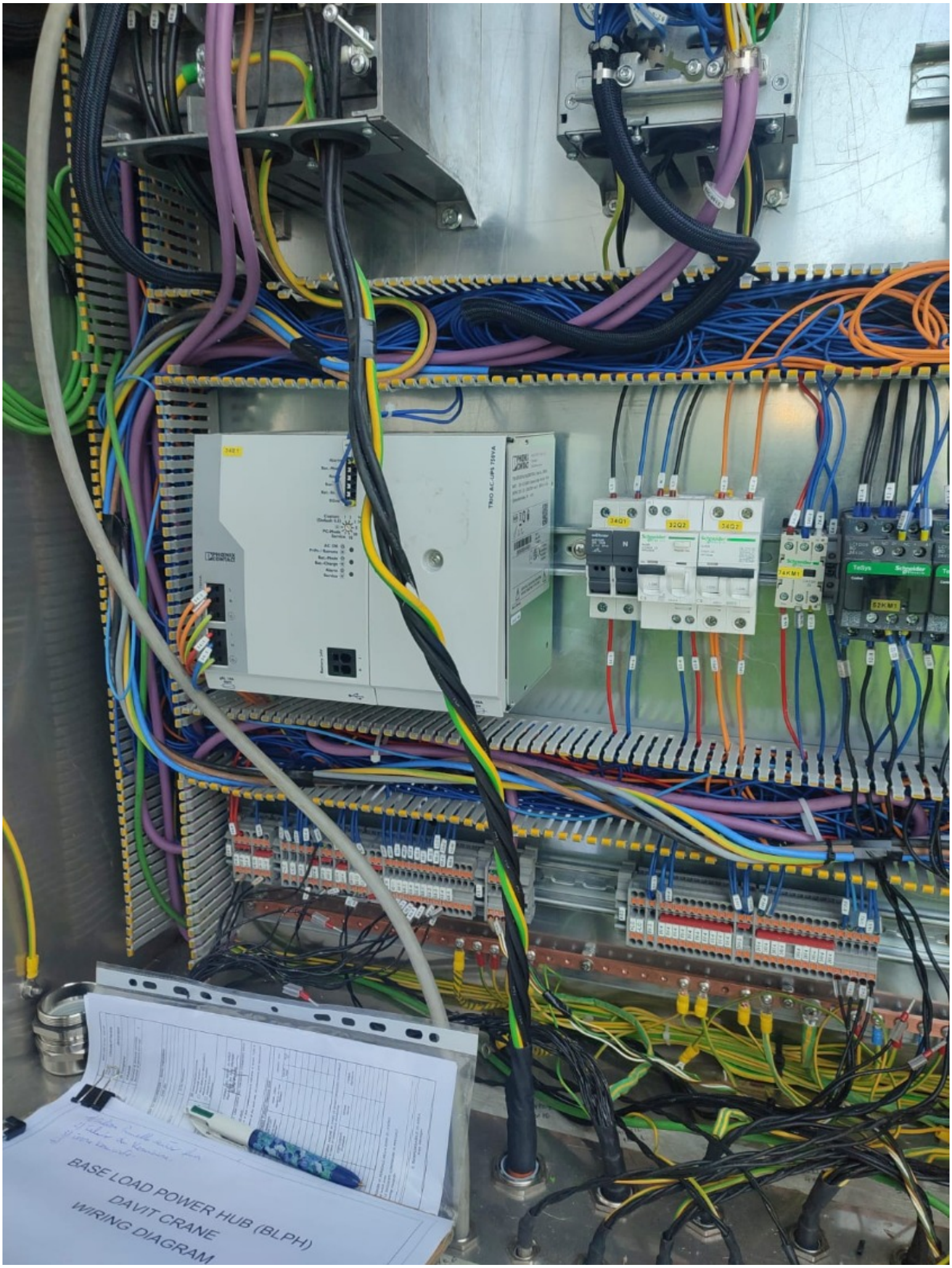
Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


BASE LOAD POWER HUB (BLPH)
DAVIT CRANE
WIRING DIAGRAM

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004314

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002360	1.4 Discipline	Electrical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

The profibus cable is not connected. See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-03

Signature: Digitaly signed by Giovanni Tangianu 2025-04-03T13:01:19.560Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2025-04-03T13:01:36.807Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004316

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002360	1.4 Discipline	Electrical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

All Exstenal cable tags by Vendor is in plastic .Need to change to SS type. See attached photo.

Name: Giovanni Tangianu

Date: 2025-04-03

Signature: Digitaly signed by Giovanni Tangianu 2025-04-03T14:03:56.098Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2025-04-03T14:04:08.811Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature


M2 BRAKE
PTC M1

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004317

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002360	1.4 Discipline	Electrical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Vendor Crane wiring Diagram(1724001010-MAC-DG-00012_Rev.3) is not alligned with internal Panel. Documentation to be update in compliance with Items installation.

Name: Giovanni Tangianu

Date: 2025-04-03

Signature: Digitaly signed by Giovanni Tangianu 2025-04-03T14:11:28.305Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	VND Vendor	Signature	Digitaly signed by Giovanni Tangianu 2025-04-03T14:11:56.847Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Name

Date

Signature

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30000119

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002922	1.4 Discipline	Electrical
1.2 Item	A3/+04-QF1	CRANE - A3/+04-QF1	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

New and definitive protection setting to be implemented on SG-200N1 drawer A3/+04.

Name: Mattia Girotti

Date: 2024-10-01

Signature: Digitaly signed by Mattia Girotti 2024-10-01T13:21:31.566Z

3 - DEFECT ASSESSMENT

Update the protection study on the drawer.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Mattia Girotti
3.4 Activity code	COMM Commissioning	Date	2024-10-01
3.5 Action by	PRE-COMM	Signature	Digitaly signed by Mattia Girotti 2024-10-01T13:22:03.775Z

4 - PERFORMED ACTION

The definitive setting has been updated

Name

Date

Signature

5 - CLEARANCE CHECK

Done

Name: Mattia Girotti

Date: 2024-11-21

Signature: Digitaly signed by Mattia Girotti 2024-11-21T09:44:09.575Z

6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003139

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000541	1.4 Discipline	Electrical
1.2 Item	83020-CEL	LV Switchgear / Crane	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Bending radius to be arranged better on the MCT on the floor , near the Panel Crane- JB-200E3.
See the attached photo.

Name: Giovanni Tangianu

Date: 2025-01-21

Signature: Digitaly signed by Giovanni Tangianu 2025-01-21T16:29:03.919Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Giovanni Tangianu 2025-01-21T16:29:52.523Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-04

Signature: Digitaly signed by Josip Krizanic 2025-03-04T14:18:46.236Z

6- CLEARANCE APPROVAL

Name

Date

Signature





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003860

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002362	1.4 Discipline	Mechanical
1.2 Item	X-99001	Lifting Davit	
1.3 Subsystem	99-00	Crane	

2 - OBSERVATION

Earthing system not connected.

Name: Kangi Albonetti

Date: 2025-02-17

Signature: Digitaly signed by Kangi Albonetti 2025-02-17T11:57:40.193Z

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-17
3.5 Action by	RM_CONSTR RM	Signature	Digitaly signed by Kangi Albonetti 2025-02-17T11:57:53.239Z

4 - PERFORMED ACTION

Name

Date

Signature

5 - CLEARANCE CHECK

Grounding has been connected.

Name: Giovanni Tangianu

Date: 2025-04-02

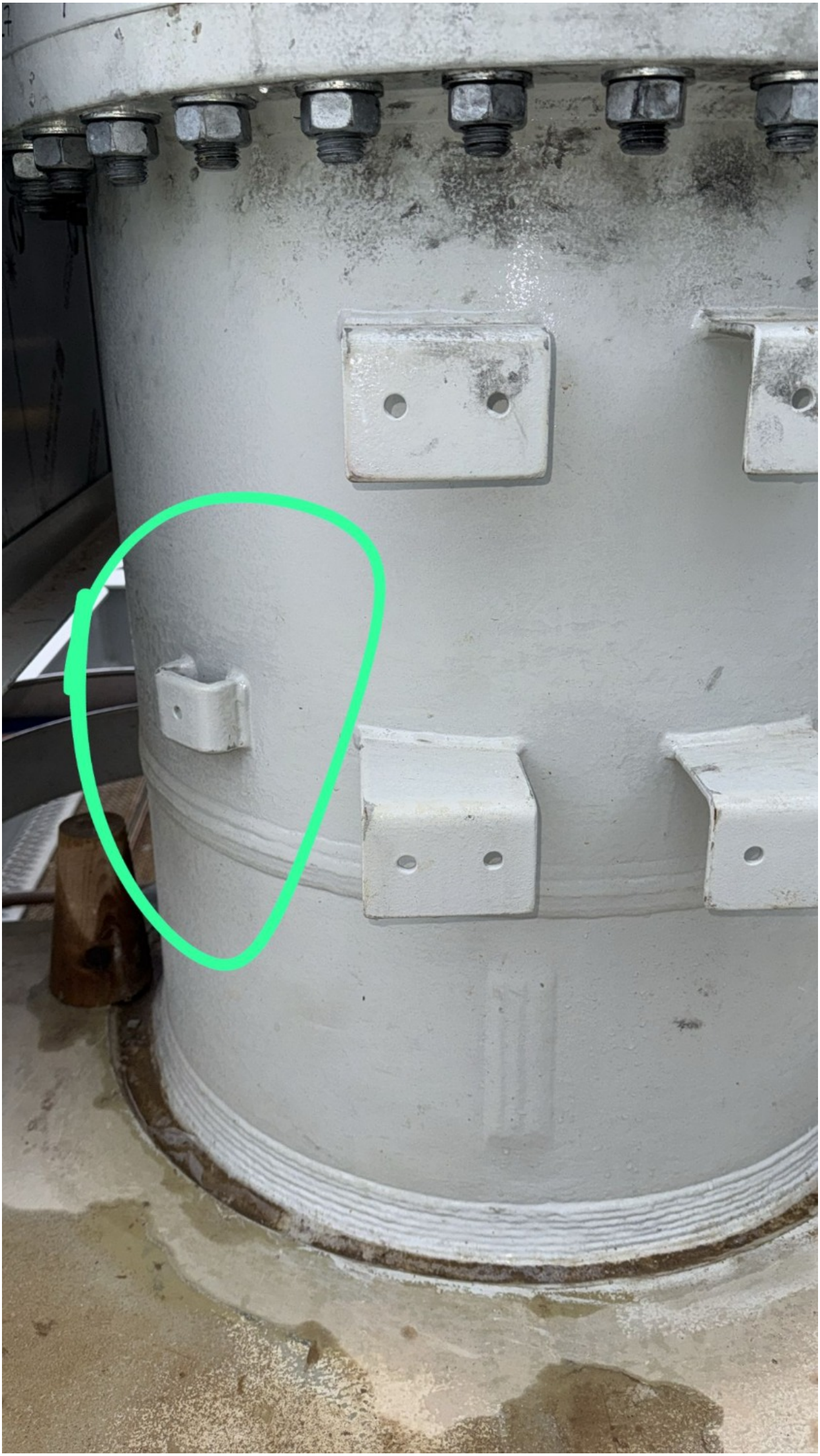
Signature: Digitaly signed by Giovanni Tangianu 2025-04-02T07:38:00.720Z

6- CLEARANCE APPROVAL

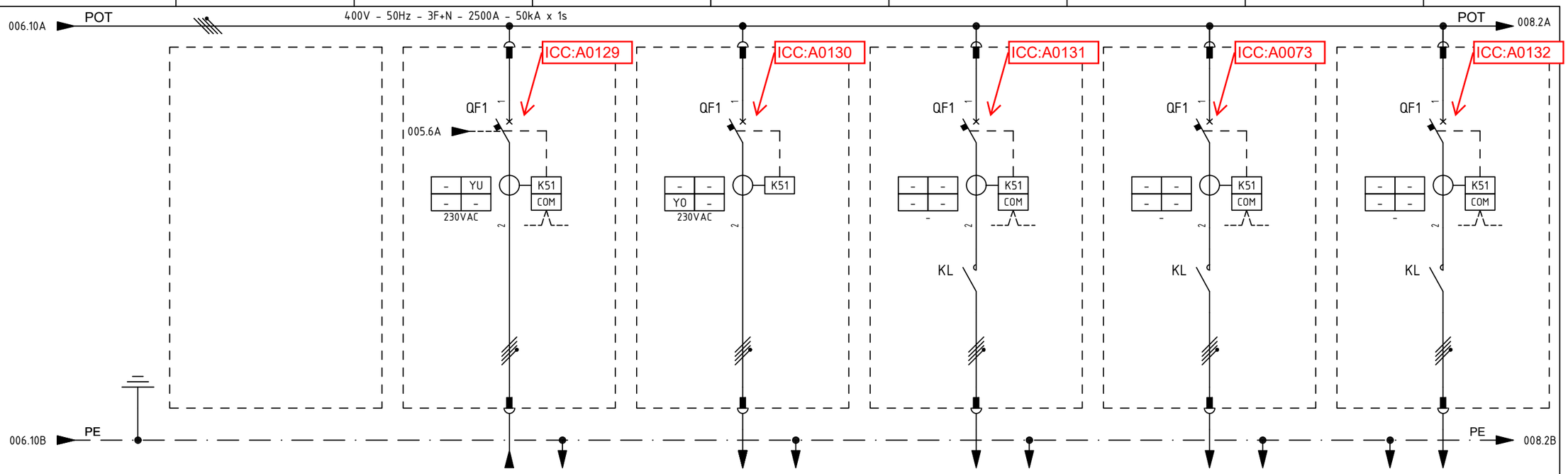
Name

Date

Signature



Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS



ITEM				JB-200E2	UP-200F3	SPARE	DP-200N1	JB-200E3
UTILITY			2	TEMPORARY GENERATOR / MOBILE BATTERY PACK	AC UPS PAS - 30 MIN UP-200F3 - LINE A	SPARE	DB - LIGHTING & SMALL POWER - BoP	CRANE
COLUMN/CUBICLE			3	A2 / +08	A3 / +01	A3 / +02	A3 / +03	A3 / +04
RATED POWER | RATED CURRENT			4/5	138 kW | 210 A	36.0 kW | 57.8 A	- kW | - A	15.35 kW | 23.7 A	25 kW | 37.8 A
TYPICAL FUNCTIONAL			6	LE2-320	L1-100	LK1-40	LK1-100	LK1-63
CIRCUIT BREAKER (ABB)	TYPE		7	XT5S - 400	XT2S - 160	XT2S - 160	XT2S - 160	XT2S - 160
	VERSION		8	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED	4P - FIXED
	TRIP UNITS		9	EKIP HI TOUCH LSIG (In = 320A)	EKIP DIP LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 40A)	EKIP HI TOUCH LSIG (In = 100A)	EKIP HI TOUCH LSIG (In = 63A)
	Icu	KA	10	50 kA	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	(0.4 - 1) x In
		Range t	12	k/I^2	k/I^2	k/I^2	k/I^2	k/I^2
SEL. SHORT-CIRCUIT	S	Range A	13	(0.6 - 10) x In	(1 - 10) x In	(0.6 - 10) x In	(0.6 - 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	0.05 - 0,4 sec / k/I^2
INST. SHORT-CIRCUIT	I	Range A	15	(1.5 - 15) x In	(1 - 10) x In	(1.5 - 15) x In	(1.5 - 15) x In	(1.5 - 15) x In
		Range t	16	instantaneous	<= 0.02 sec	instantaneous	instantaneous	instantaneous
EARTH FAULT PROTECTION	G	Range A	17	(0.1 - 1) x In	(0.2 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In	(0.1 - 1) x In
		Range t	18	t=k / t=k/I^2	0.1 - 0.8 sec	t=k / t=k/I^2	t=k / t=k/I^2	t=k / t=k/I^2
CONTACTOR (ABB)			19	-	-	AF40-40-00-13 (70A-AC1); 100-250VAC/DC	AF80-40-00-13 (70A-AC1); 100-250VAC/DC	AF52-40-00-13 (100A-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 84.10	SUBSISTEM 83.00	SUBSISTEM 83.20	SUBSISTEM 99.00
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	5 x (1 x 95)	4G35	-	5G50	5G16

/ SYSTEM

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)

=

+

DWG n° : 231298/SD/11

Item n° : PF1002983/26

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

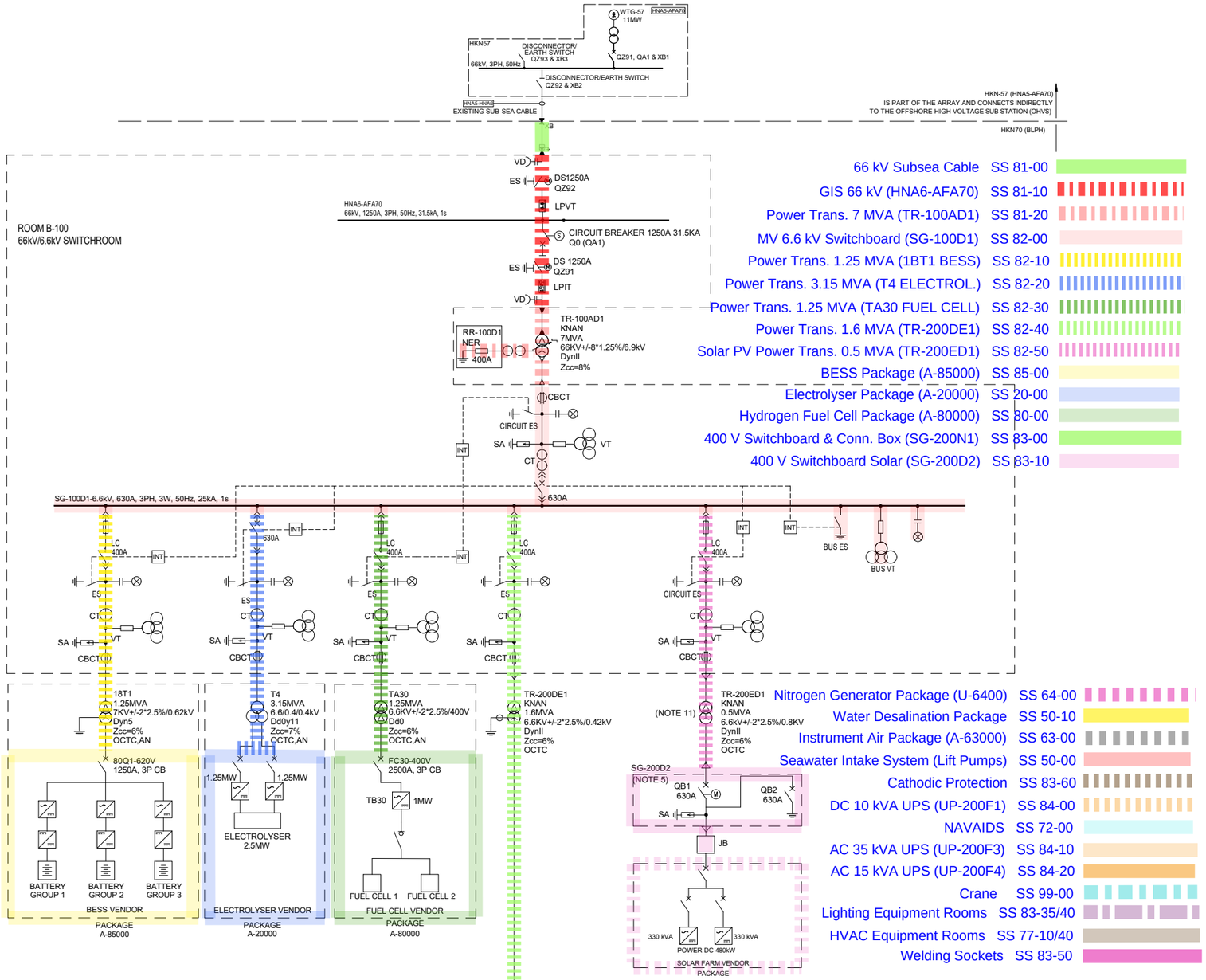
SHEET 007

REV. 03

F.to UNI A3: 420mmx297mm

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

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



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	GB/AMA	OYFO/MDO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :

OVERALL/KEY SINGLE LINE DIAGRAM

CONTRACT NO./TITLE CW-I-IP4-2023-05/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

01

File Name : 123A90-DDL-EL-DG-20158_REV01.dwg

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: 99-00 & process: MC & discipline : E

Electrical	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
83020-CEL	LV Switchgear / Crane	ONSHORE	C10000541	CPX09	100	2025-01-21	RFC 1
JB-200E3	Davit crane JB	ONSHORE	C10001224	CPX31	100	2025-04-03	RFC 1
X-99001	Lifting Davit	ONSHORE	C10002360	CZX01E	100	2025-04-03	RFC 1

ITEM	Tag	83020-CEL	: LV Switchgear / Crane			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	99-00	: Crane			Module	LD_B-200/LD
TASK	code	C10000541		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 5G16 mm2 Color GREY

From SG-200N1 To JB-200E3

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.	PL
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.	OK
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	83020-CEL	: LV Switchgear / Crane			Dwg	123A90-DDL-EL-LIS-20148
	S/Sys	99-00	: Crane			Module	LD_B-200/LD
TASK	code	C10000541		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	0,10	
6		PH 2	0,10	
7		PH 3	0,10	
8	ARMOUR CONTINUITY Ω		NA	
9	PROTECTIVE CONDUCTOR CONTINUITY Ω		0,10	
INSULATION				
10	CORES / ARMOUR+EARTH MΩ	PH1 / PH2-PH3-A-E	>1999	
11		PH2 / PH1-PH3-A-E	>1999	
12		PH3 / PH1-PH2-A-E	>1999	
13	CABLE IS CORRECTLY RE-CONNECTED.		Yes	

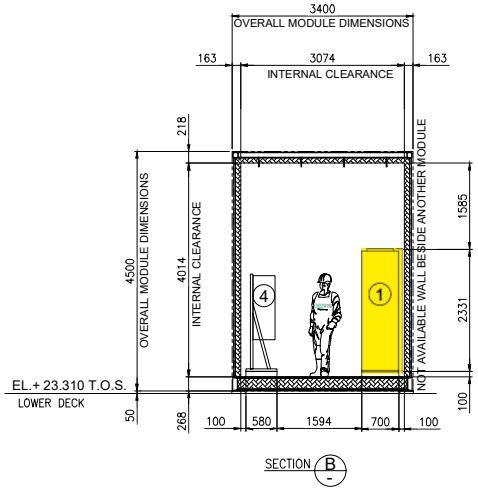
TESTING INSTRUMENTS USED

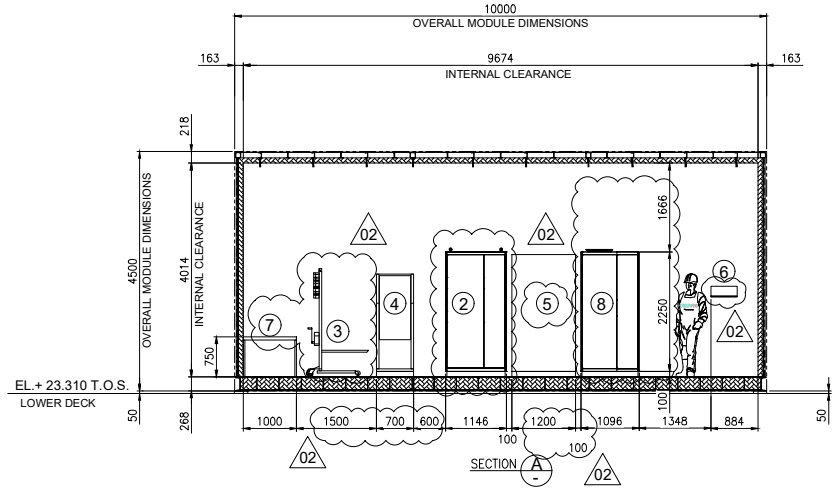
TYPE / SERIAL N° :	VOLCRAFT 1000V - ET-200 S/N:H240103023	TYPE / SERIAL N° :	MEGGER : KEW3125A SERIAL: W8330207
Calibration certificate N° and date:	N°LAT 042 00768/24 _ 12/10/2024	Calibration certificate N° and date:	N°7722/24 _ 10/07/2024

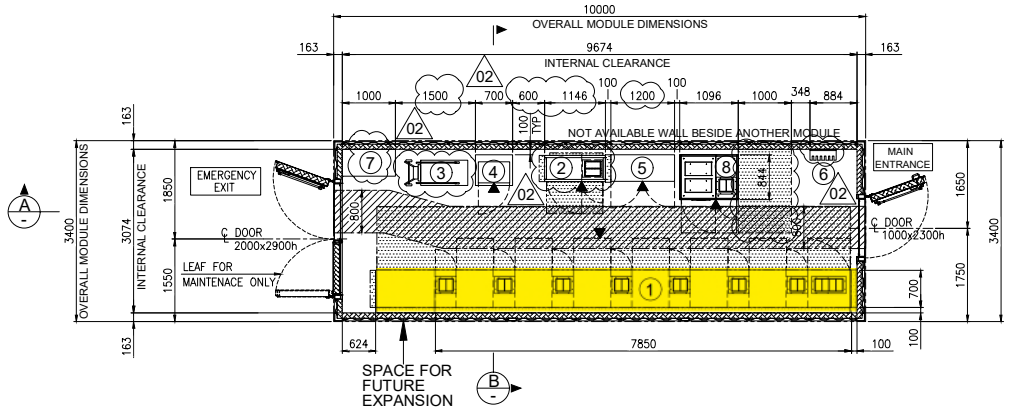
Comments: Nota 4: refer to PL C30000679

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-01-21	2025-01-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-21T16:04:52.211Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-01-21T16:37:46.175Z	

DRAWING NO. 123A90-DDL-EL-DL-20105 REV. 02





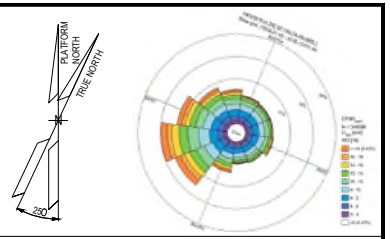


EQUIPMENT LAYOUT
"B-200" LV (400V) SWITCHGEAR ROOM
BOTTOM PLAN

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	500	1638	
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

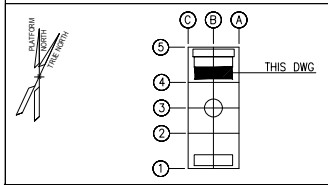
U.N.O. _____ UNLESS NOTED OTHERWISE
T.O.S. _____ TOP OF STEEL
_____ ESCAPE CORRIDOR - WIDTH 800mm.
_____ MAINTENANCE AREA - VENDOR REQUIREMENT
_____ SWITCHGEAR ROOM ENCLOUSURE
_____ FRONT OF EQUIPMENT

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	DYFO/MDO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20105
REV.: 2_A | DATE: 08/08/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

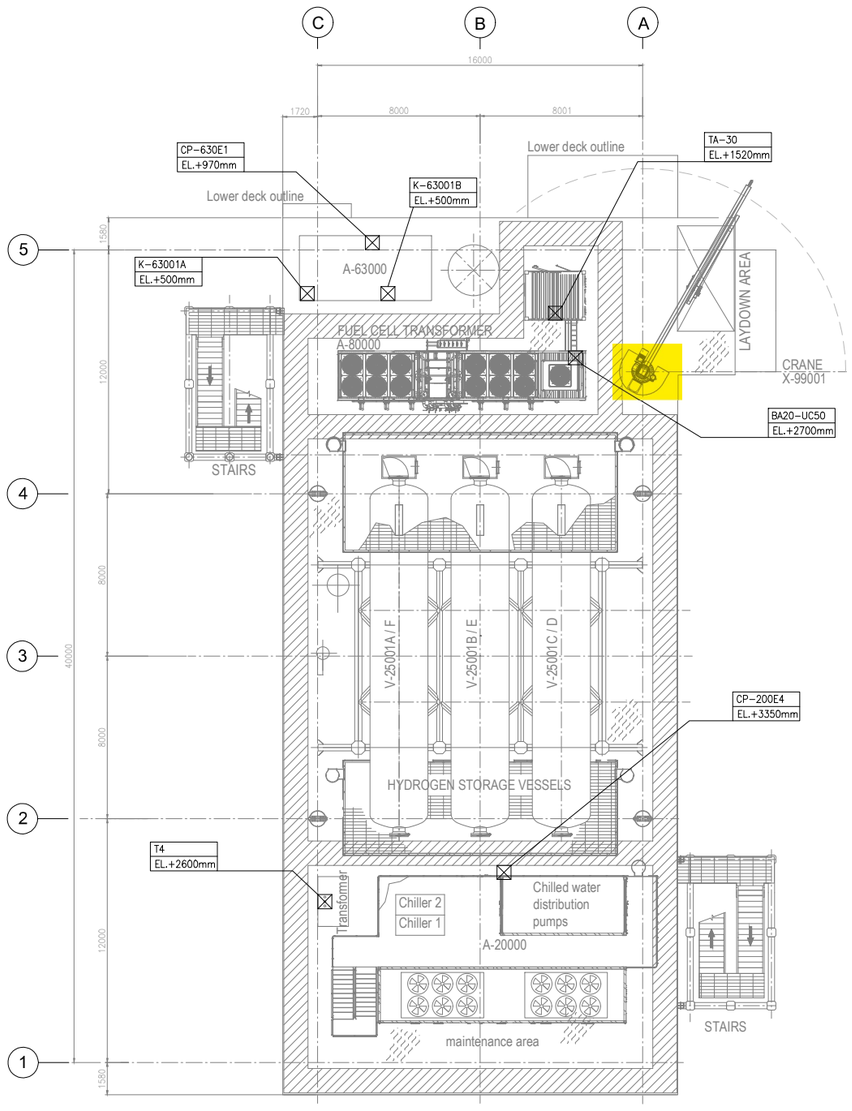
TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
LV SWITCHROOM

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

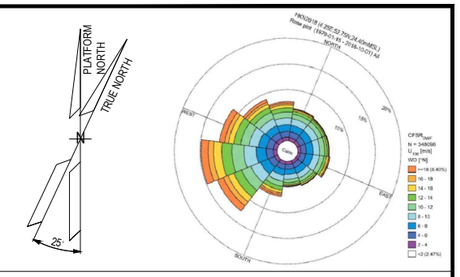
File Name : 123A90-DDL-EL-DL-20105_REV02.dwg

DRAWING NO. 123A90-DDL-EL-DL-20100

REV. 01



PLAN ON TOP DECK
EL+30.310 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. UNLESS NOTED OTHERWISE.
4. AFTER INTERFACE PANEL/BATTERY LIMIT CABLES WILL BE ROUTED INSIDE VENDOR CABLETRAYS

LEGEND

⊠	INTERFACE PANEL/BATTERY LIMIT
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-20140	ELECTRICAL HEAT TRACING JUNCTION BOX LAYOUT
123A90-DDL-EL-DL-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	22/07/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	29/05/24	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20100**

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

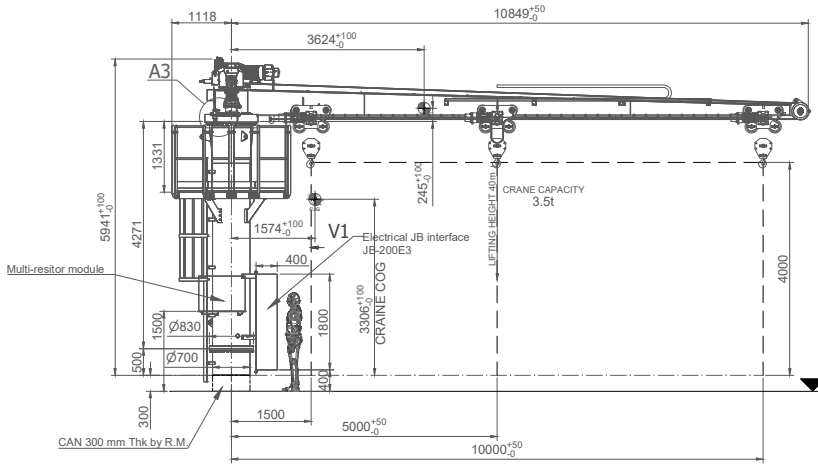
ROSETTI MARINO SpA

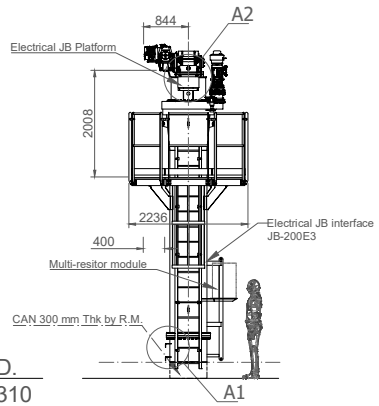
TITLE :
BASE LOAD POWER HUB (BLPH)
ELECTRICAL EQUIPMENT LAYOUT
TOP DECK

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 22/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20100	SHEET 001	REV. 01

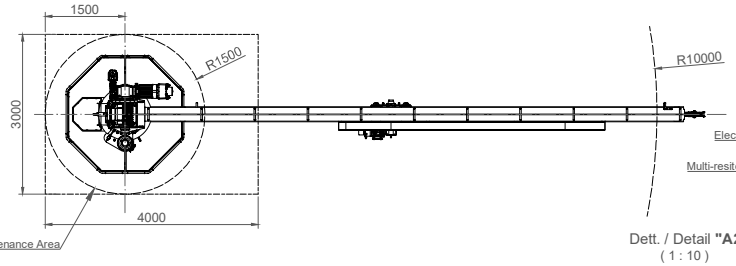
File Name : 123A90-DDL-EL-DL-20100-Electrical Equipment Layout - Top Deck

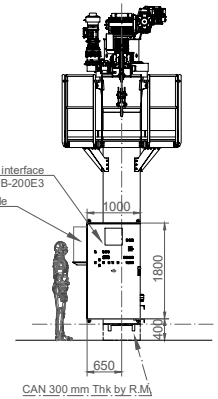
DRAWING NO. 1724001010-MAC-DA-00009 | REV. 4



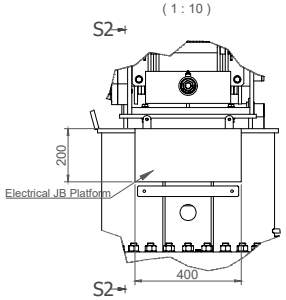


Vista da / View from **"V1"**
(1 : 50)

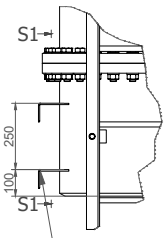




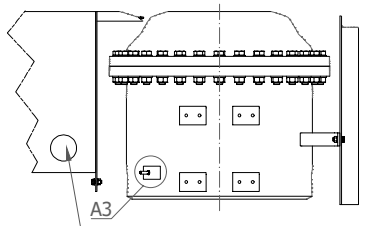
Dett. / Detail **"A2"**
(1 : 10)



Dett. / Detail **"A1"**
(1 : 10)



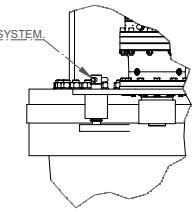
Sez. / Sec. **"S1-S1"**
(1 : 10)



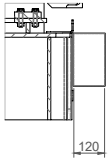
WELDED "L" PROFILE
For supports cable ladder

EL. CABLE IN DN32
For cable by R.M.

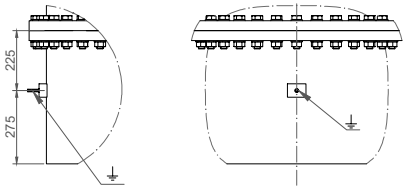
Dett. / Detail **"A3"**
(1 : 10)



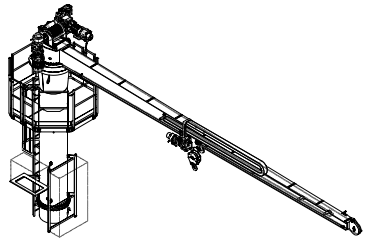
Sez. / Sec. **"S2-S2"**
(1 : 10)



Dett. / Detail **"A3"**
(1 : 10)



EARTING POINT
Threaded stud, Ø16mm, L.30mm, material S355J2+N



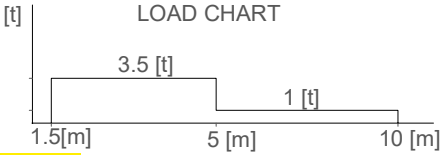
Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

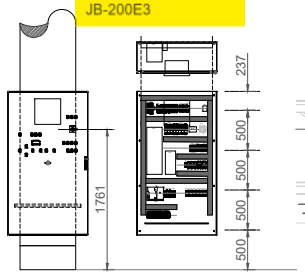
Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)

Test load:

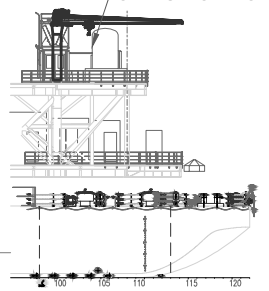
5.6[t]x5[m] - 1.6[t]x10[m]
in according to DNV-ST-0378 rules



Electrical JB interface
JB-200E3



STORAGE POSITION
ON BASE LOAD POWER HUB

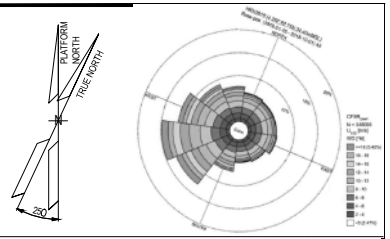


Description	Q.ty	Notes
CRANE TYPE		PLATFORM CRANE OFF-SHORE
LIFTING CAPACITY	3.5[t] 1.5-5[m] 1[t] 1.5-10[m]	STEEL ROPE HOIST WINCH
HOOK STROKE	40[m]	Electric driven by gearbox Brake on the El. Motor
LIFTING SPEED	3.75/15[m/min]	Variable speed motor
Hoist winch stroke (radial movement)	1.5-10[m]	Eletric driven rack - pinion system
RADIAL SPEED	2-8[m/min]	
PRELIMINARY WEIGHT	6000[kg]	
ROTATIONAL MOVEMENT	0-180°	By electric Motor Geqarbox Pinion on slewing bearing
ROTATIONAL SPEED	0.25/0.5[rpm]	Variable speed motor
WORKING TEMPERATURE	-9/45[°C]	
HAZAEDOUS AREA:		SAFE AREA
PERSONEL LIFT		NO
POWER SUPPLY	400[v]/3Ph/50[hZ] (3Ph+N)	
TOTAL POWER ABS.	20[kW]	

EL.	Description Eng	MATERIAL	Q.TY	WEIGHT
3	Travelling Trolley Assembly	S 355 J2+N UNI EN 10025	1	256,01 kg
2	Boom Assembly	S 355 J2+N UNI EN 10025	1	2542,26 kg
1	Fixed Column Ass.	S 355 J2+N UNI EN 10025	1	1241 kg

Material :
S355 J2+N

Painting Color :
RAL Code: 7038.



NOTES

LEGEND

HOLDS

REMAZEL ENGINEERING

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	05/11/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
3	20/09/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
2	21/08/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : 123A90A – Base Load Power Hub Platform
CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

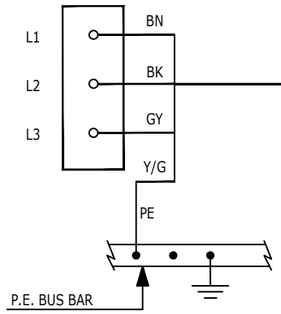
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE 18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00009	SHEET 001	REV. 4

File Name : - 1724001010-MAC-DA-00009

FROM	TO

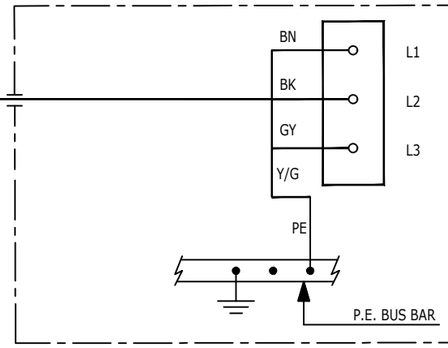
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A7/+01

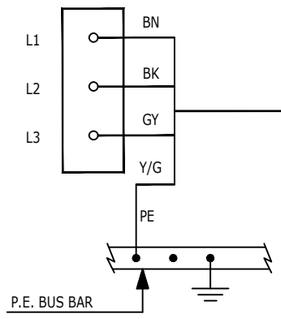


83018-CEL
4G4 mm²

DESCRIPTION: SEA WATER INTAKE PUMP A
TAG NUMBER: PM-50001 A

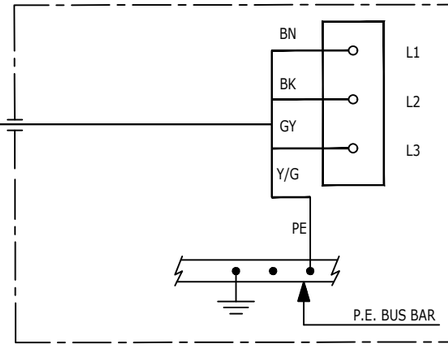


COLUMN/CUBIC.: A6/+01

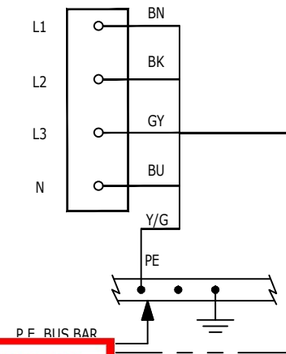


83019-CEL
4G4 mm²

DESCRIPTION: SEA WATER INTAKE PUMP B
TAG NUMBER: PM-50001 B



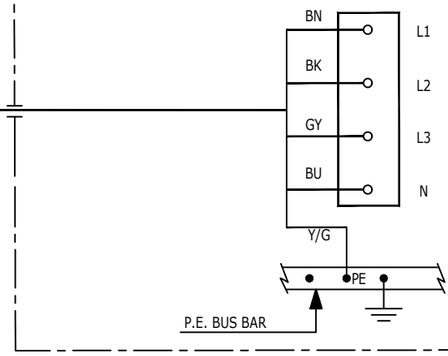
COLUMN/CUBIC.: A3/+04



83020-CEL
5G16 mm²

DESCRIPTION: CRANE
TAG NUMBER: JB-200E3

CB: 30Q1



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

REV.:	DATE:	SIGNATURE:
2_I	20/01/25	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

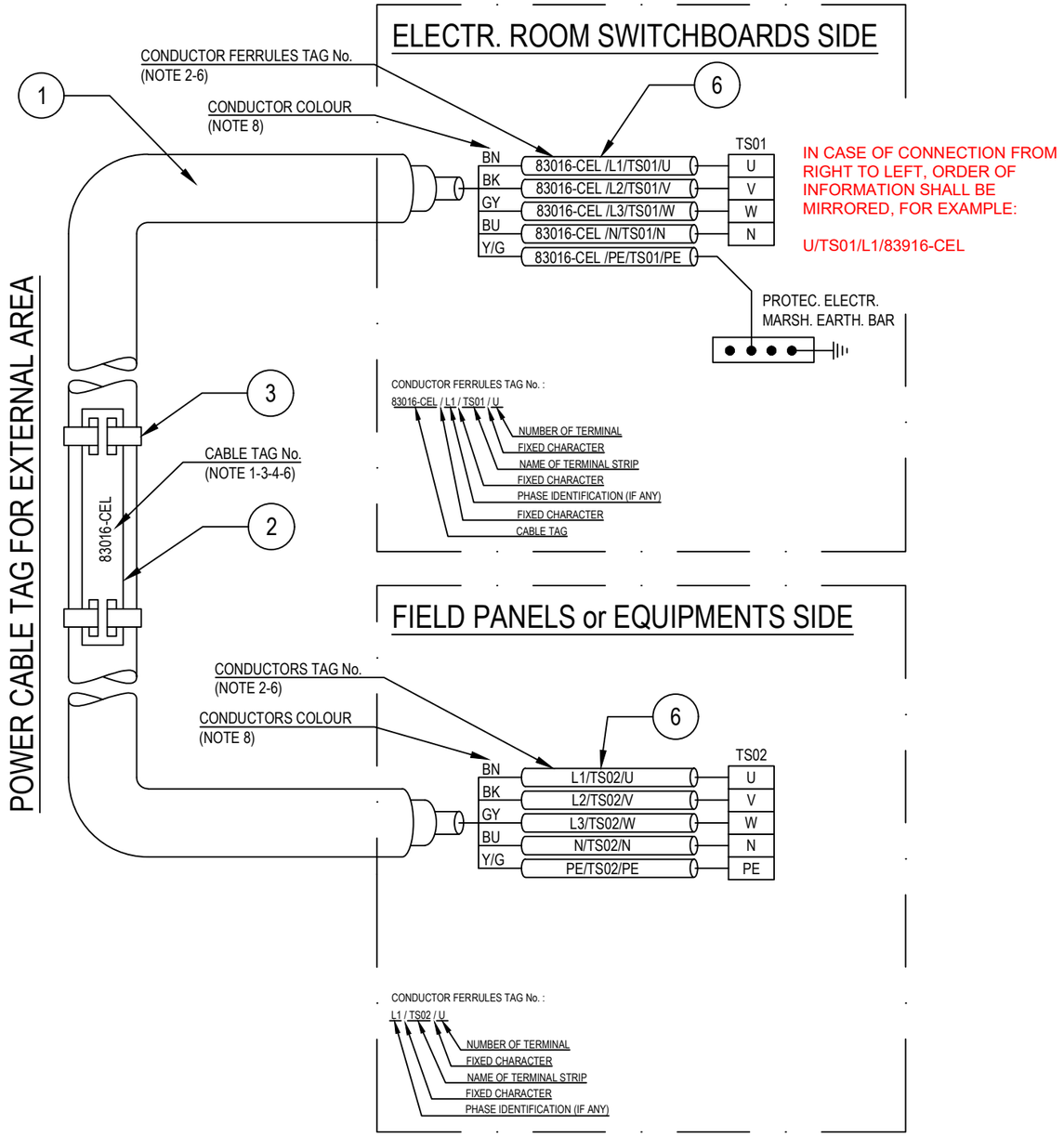
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : 1:X

A3 | DRAWING NO. 123A90-DDL-EL-DG-20149 | SHEET 024 | 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.

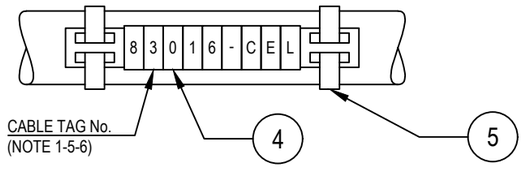
5) THE CABLE TAG FOR INTERNAL AREA SHALL BE DONE BY ENGRAVED PLASTIC SLIP ON CHARACTERS ONTO PLASTIC TIE, BLACK LETTER (H=5mm) ON WHITE.

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.:	DATE:	SIGNATURE:
2_D	20/12/24	V.Ramponi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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)

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

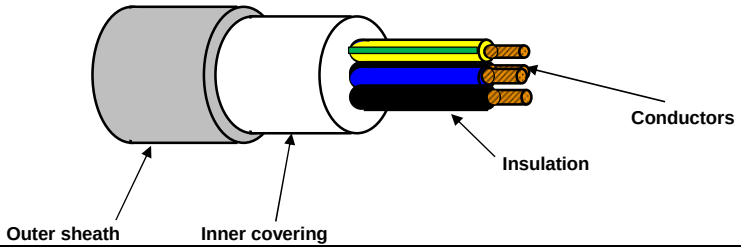
F.to UNI A3: 420mmx297mm

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	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
83020-CEL	Cable	EL	VFC	123A90-DDL-EL-LIS-20148						SG-200N1	LV 0,4 kV MCC Switchgear	Lower Deck (B-200)	A3/04	JB-200E3	Crane JB	Upper Deck	Junction Box	ELECV15-5G16	Cable Cu Cl.2/EPR/LSZH 0,6/1kV 5G16mm² - Grey	M32	n.a.			T1_M32_Single				L-450-101-LVT-024 / L-600-101-LVT-017 / L-600-101-LVT-019 / L-600-101-LVT-020 / E-MCT-204 / L-600-101-LVT-010 / L-750-101-LVT-015 / L-150-101-LVT-102 / E-MCT-U09

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

5G16 - L.V. POWER CABLE - Flame Retardant



TECHNICAL FEATURES

Conductors :	**STRANDED** plain/bare annealed copper wires IEC 60228 Class 2
Insulation :	EPR compound, quality to IEC 60092.360, Nominal Thickness 1,0 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 1,0 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 1,4 mm
Outer sheath color code:	**Grey**
Outer printing (INKJET) :	**FLEI - ELECTRIC CABLE - 1000V - 5G16 SQMM - EPR/LSZH - 0,6/1 KV - IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**
Outer diameter :	(24,0 ± 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 :	≥ 530 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 :	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 | PROVERLIS | CROSSWIND

ITEM	Tag	JB-200E3	: Davit crane JB			Dwg	1724001010-MAC-DA-00009
	S/Sys	99-00	: Crane			Module	UD
TASK	code	C10001224		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CPX31 Junction and Marshalling Box

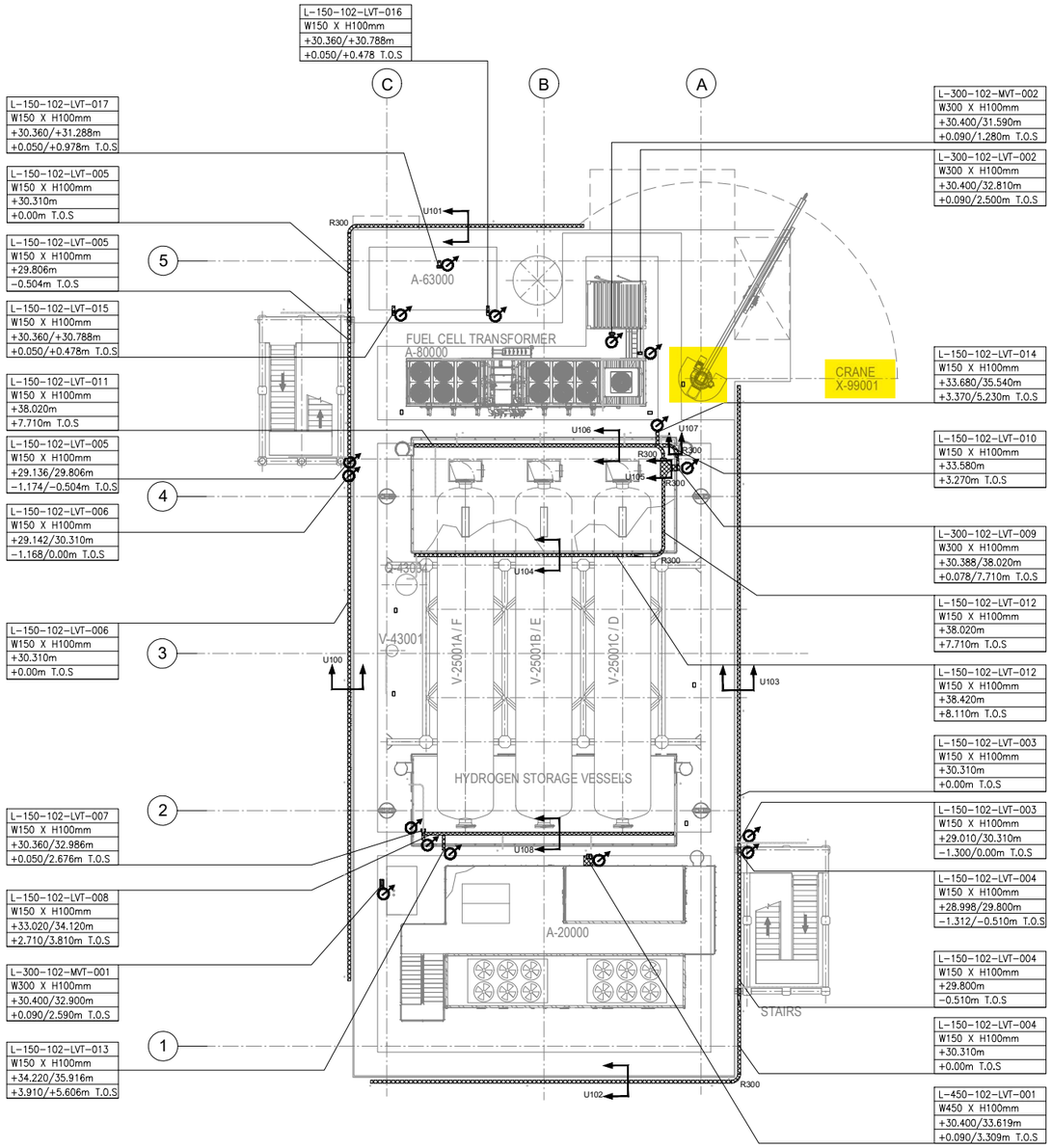
1	Check box is de-energized and safe.	OK
2	Check box is correctly mounted and easily accessible.	OK
3	Check box tagging against drawing.	OK
4	Check nameplate data is correct.	OK
5	Check flameproof joints are clean and greased with approved lubricants (if required).	NA
6	Check for damaging gaskets.	OK
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:

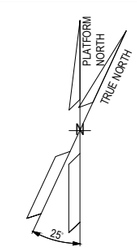
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	vip	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-02	2025-04-03	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-02T12:18:54.592Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-03T14:12:57.500Z	

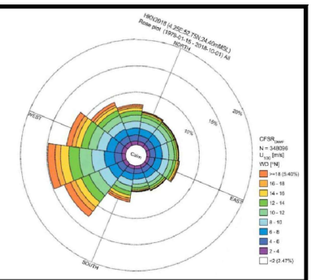
DRAWING NO. 123A90-DDL-EL-DL-20107

REV. 01



MAIN CABLE ROUTING
PLAN ON UPPER DECK
EL+30.310 T.O.S.





NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS VALID ONLY FOR ELECTRICAL CABLE ROUTING LAYOUT.
3. A MINIMUM OF 20% CAPACITY IN EACH CABLE LADDER SHALL BE PROVIDED FOR FUTURE EXTENSION.
4. DRAWING SPLIT INTO MULTIPLY SHEETS FOR CLARITY.
5. FOR INSTALLATION DETAIL OF CABLE LADDER REFER TO DOC. 123A90-DDL-EL-DD-20093.
6. 50mm CABLETRAYS ROUTES MAY BE MODIFIED DURING CONSTRUCTION WITHOUT OFFICIAL APPROVAL

LEGEND

- ELECTRICAL 6.6 KV CABLE TRAY
- ELECTRICAL LV CABLE TRAY
- CABLE LADDER ELEVATION CHANGE
- ELECTRICAL CABLE TRAY VERTICAL RAISE
- ELECTRICAL CABLE TRAY VERTICAL DROP
- UXXX — CABLE SECTION

WIDTH X HEIGHT — TAG / SIZE / ELEVATION / ELEVATION(T.O.S)

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DL-20107

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

ROSETTI MARINO SpA

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP DECK
123A90-DDL-EL-DD-20093	ELECTRICAL TYPICAL INSTALLATION DETAILS-CABLE ROUTES SYSTEM
123A90-DDL-EL-DL-20108	ELECTRICAL CABLES ROUTING LAYOUT - LOWER DECK
123A90-DDL-EL-DL-20109	ELECTRICAL CABLES ROUTING LAYOUT - BELOW LOWER DECK
123A90-DDL-EL-LIS-20148	ELECTRICAL POWER & CONTROL CABLE SCHEDULE
123A90-DDL-EL-DG-20125	LIGHTING & SOCKET CIRCUIT DIAGRAM

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	30/07/24	ASR	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	14/06/24	ASR	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL CABLES ROUTING LAYOUT
TOP DECK

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:150
DRAWN ASR	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 30/07/24

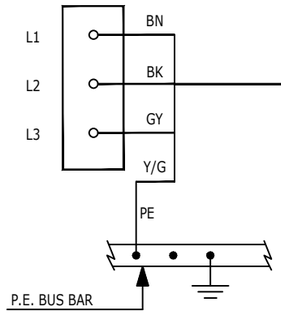
A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-EL-DL-20107	1of7	01

File Name : 123A90-DDL-EL-DL-20107

FROM	TO

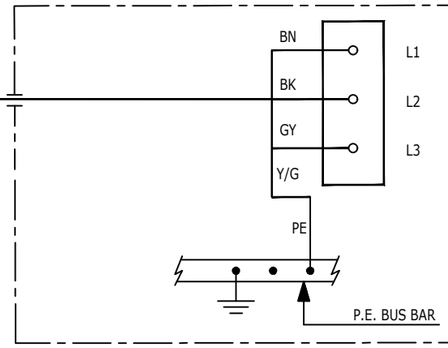
DESCRIPTION: LV SWITCHGEAR
TAG NUMBER: SG-200N1

COLUMN/CUBIC.: A7/+01

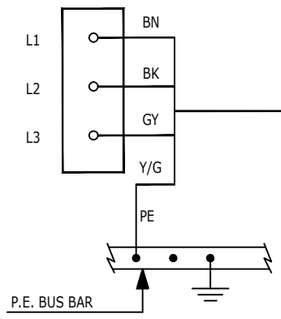


83018-CEL
4G4 mm²

DESCRIPTION: SEA WATER INTAKE PUMP A
TAG NUMBER: PM-50001 A

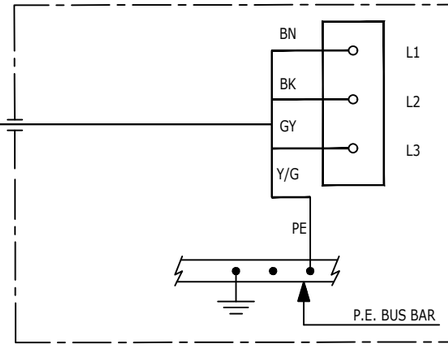


COLUMN/CUBIC.: A6/+01

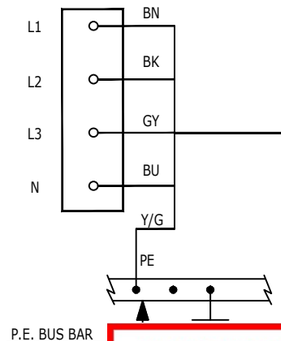


83019-CEL
4G4 mm²

DESCRIPTION: SEA WATER INTAKE PUMP B
TAG NUMBER: PM-50001 B



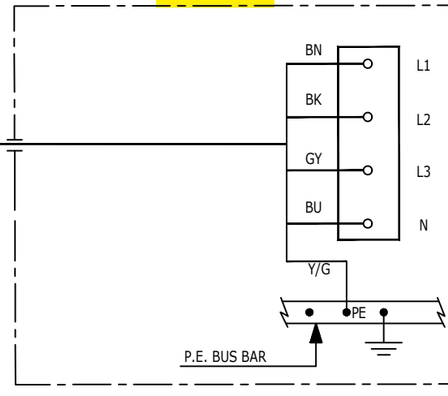
COLUMN/CUBIC.: A3/+04



83020-CEL
5G16 mm²

DESCRIPTION: CRANE
TAG NUMBER: JB-200E3

CB: 30Q1



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

REV.:	DATE:	SIGNATURE:
2_M	02/05/25	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

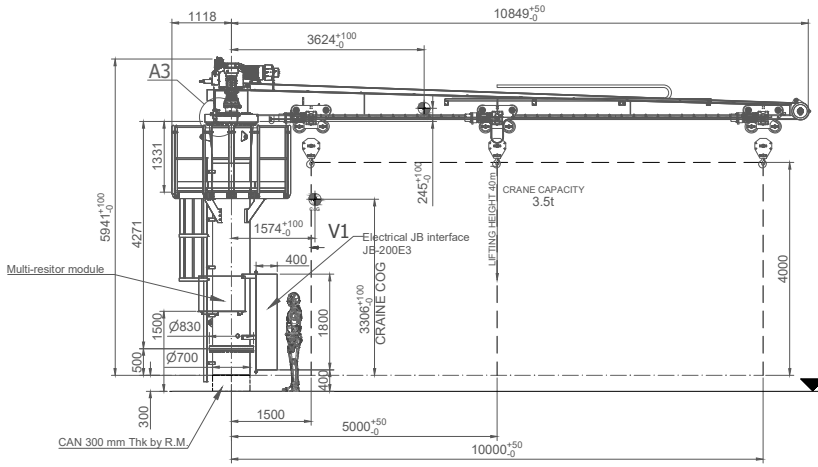
SHEET 024

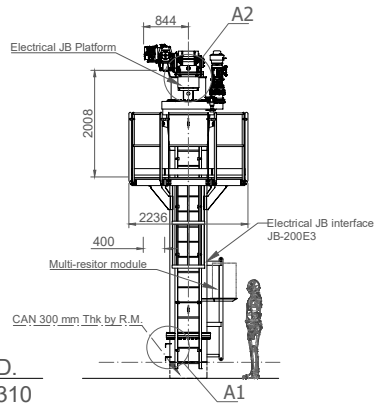
REV. 02

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

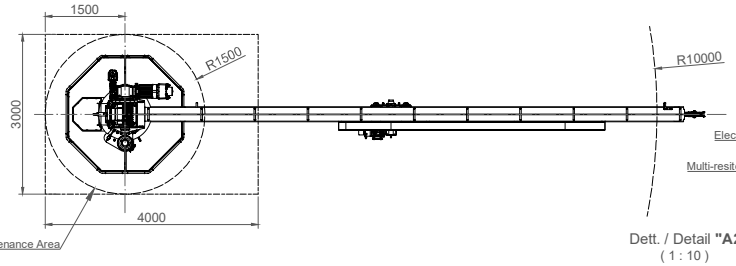
F.to UNI A3: 420mmx297mm

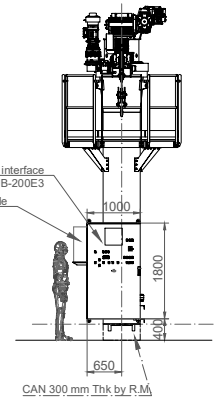
DRAWING NO. 1724001010-MAC-DA-00009 | REV. 4



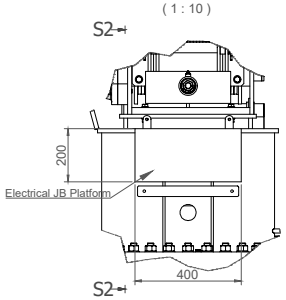


Vista da / View from **"V1"**
(1 : 50)

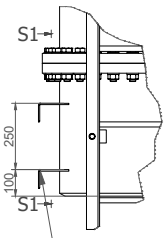




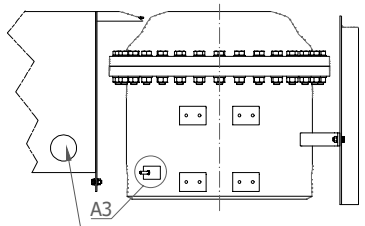
Dett. / Detail **"A2"**
(1 : 10)



Dett. / Detail **"A1"**
(1 : 10)



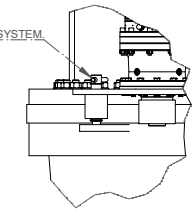
Sez. / Sec. **"S1-S1"**
(1 : 10)



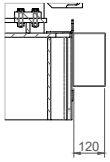
WELDED "L" PROFILE
For supports cable ladder

EL. CABLE IN DN32
For cable by R.M.

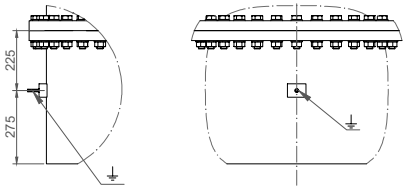
Dett. / Detail **"A3"**
(1 : 10)



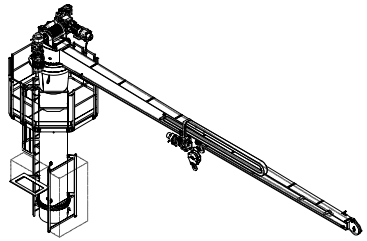
Sez. / Sec. **"S2-S2"**
(1 : 10)



Dett. / Detail **"A3"**
(1 : 10)



EARTING POINT
Threaded stud, Ø16mm, L.30mm, material S355J2+N



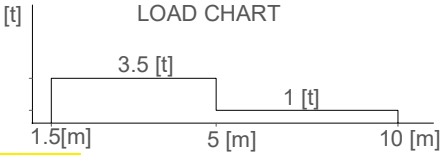
Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

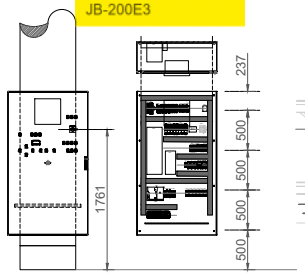
Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)

Test load:

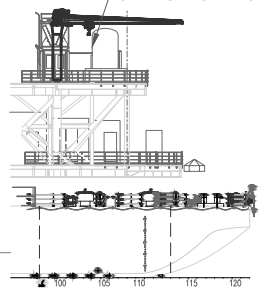
5.6[t]x5[m] - 1.6[t]x10[m]
in according to DNV-ST-0378 rules



Electrical JB interface
JB-200E3



STORAGE POSITION
ON BASE LOAD POWER HUB

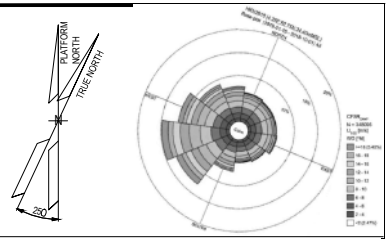


Description	Q.ty	Notes
CRANE TYPE		PLATFORM CRANE OFF-SHORE
LIFTING CAPACITY	3.5[t] 1.5-5[m] 1[t] 1.5-10[m]	STEEL ROPE HOIST WINCH
HOOK STROKE	40[m]	Electric driven by gearbox Brake on the El. Motor
LIFTING SPEED	3.75/15[m/min]	Variable speed motor
Hoist winch stroke (radial movement)	1.5-10[m]	Eletric driven rack - pinion system
RADIAL SPEED	2-8[m/min]	
PRELIMINARY WEIGHT	6000[kg]	
ROTATIONAL MOVEMENT	0-180°	By electric Motor Geqarbox Pinion on slewing bearing
ROTATIONAL SPEED	0.25/0.5[rpm]	Variable speed motor
WORKING TEMPERATURE	-9/45[°C]	
HAZAEDOUS AREA:		SAFE AREA
PERSONEL LIFT		NO
POWER SUPPLY	400[v]/3Ph/50[hZ] (3Ph+N)	
TOTAL POWER ABS.	20[kW]	

EL.	Description Eng	MATERIAL	Q.TY	WEIGHT
3	Travelling Trolley Assembly	S 355 J2+N UNI EN 10025	1	256,01 kg
2	Boom Assembly	S 355 J2+N UNI EN 10025	1	2542,26 kg
1	Fixed Column Ass.	S 355 J2+N UNI EN 10025	1	1241 kg

Material :
S355 J2+N

Painting Color :
RAL Code: 7038.



NOTES

LEGEND

HOLDS

REMAZEL ENGINEERING

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	05/11/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
3	20/09/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
2	21/08/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND | ROSETTI MARINO

TITLE : 123A90A – Base Load Power Hub Platform
CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE 18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00009	SHEET 001	REV. 4

File Name : - 1724001010-MAC-DA-00009

BASE LOAD POWER HUB (BLPH)

DAVIT CRANE

WIRING DIAGRAM

REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	1724001010-MAC-DG-00012	1	03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	1	FRONT PAGE	
02	2	SUMMARY and GENERAL NOTES	
02	10	SYMBOLS LEGEND	
03	30	INCOMING POWER LINE	
02	32	ENCLOSURE SERVICE	
02	34	UPS AND STANDSTILL HEATERS	
02	40	24Vdc SUPPLY	
02	50	HOISTING VFD CONNECTIONS	
02	52	ROTATION AND TROLLEY VFD CONNECTIONS	
02	54	ROTATION AND TROLLEY MOTORS	
02	56	MOTOR BRAKES	
02	60	CPU	
02	62	SAFETY MODULES	
02	64	SAFETY MODULES	
02	66	DIGITAL INPUT	
02	68	DIGITAL INPUT	
02	70	DIGITAL INPUT	
02	72	DIGITAL INPUT	
02	74	DIGITAL OUTPUT	
02	76	DIGITAL OUTPUT	
02	78	ANALOG INPUT AND OUTPUT	
02	80	LOAD CELL	
02	82	HOISTING AND ROTATION ENCODERS	
02	84	TROLLEY ENCODER	
02	86	MOPS COMMAND	
02	90	TERMINAL STRIP X01	
02	92	TERMINAL STRIP XS1	
02	94	TERMINAL STRIP JB / X02	

GENERAL NOTES

1:

2:

3:

4:

REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 2

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

	MANUAL POWER DISCONNECTING SWITCH		FAN		
	FUSE POWER DISCONNECTING SWITCH		STANDSTILL HEATER		
	THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY OPEN THERMOSTAT		
	DIFFERENTIAL THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY CLOSE THERMOSTAT		
	CONTACTOR / RELE' COIL		LAMP		
	POWER CONTACT		EMERGENCY PUSH BUTTON		
	NORMALLY OPEN CONTACT		NORMALLY OPEN PUSH BUTTON		
	NORMALLY CLOSE CONTACT		NORMALLY OPEN KEY SELECTOR		
	SWITCHING POWER SUPPLY		NORMALLY CLOSE LIMIT SWITCH		
	MOTOR		INDUCTIVE LIMIT SWITCH		
	MOTOR THERMAL PROTECTION		HORN		
	ENCODER		LOAD CELL		
	MOTOR BRAKE		PROTECTIVE EARTH		
	SERVICE SOCKET				

REMAZEL ENGINEERING
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e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

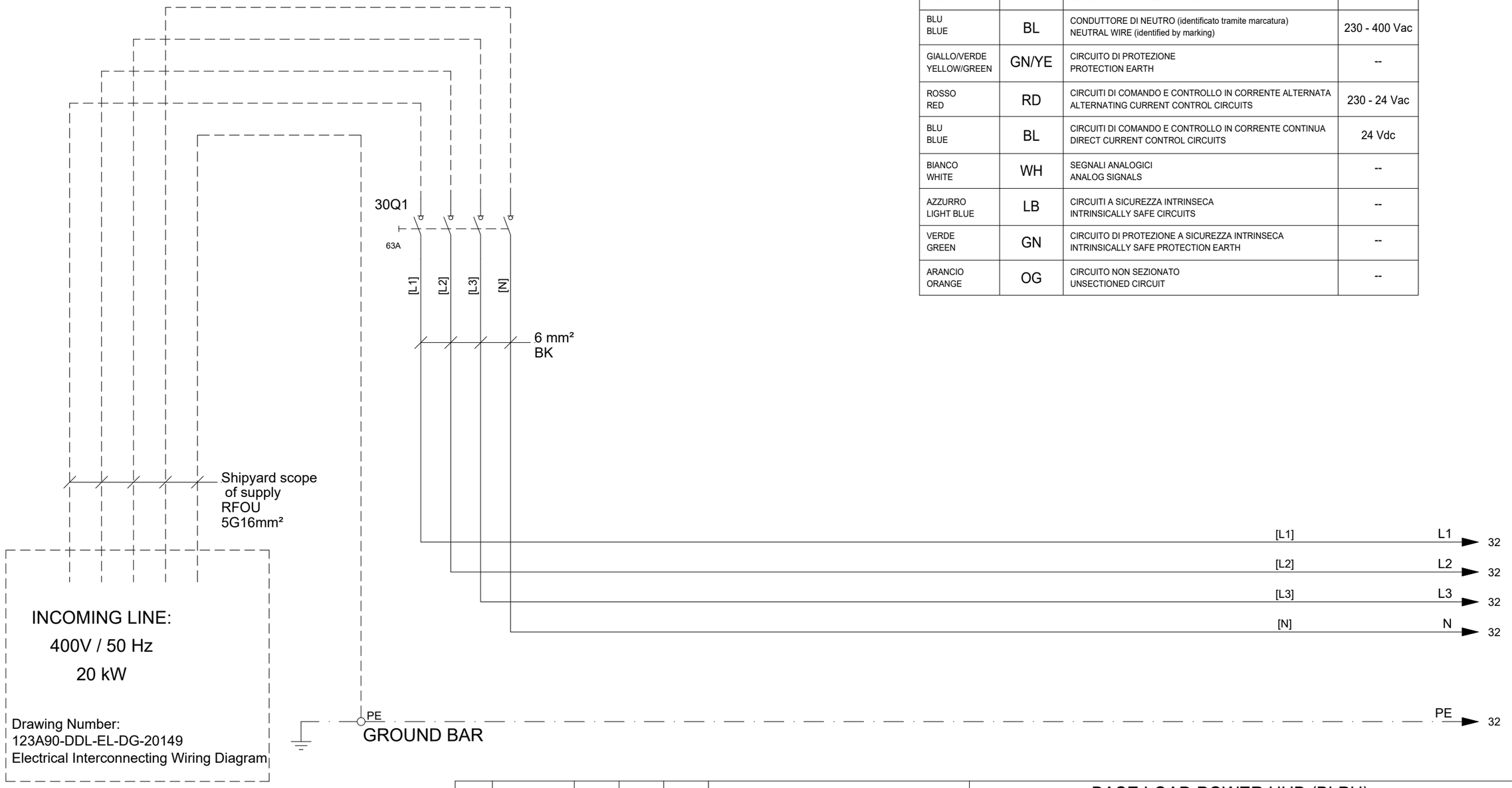
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SYMBOLS LEGEND

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 10 | REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



IDENTIFICAZIONE CONDUTTORI
WIRES IDENTIFICATION (CEI EN 60204-32)

COLORE COLOR	LEGENDA LEGEND	TIPO DI CIRCUITO CIRCUIT TYPE	TENSIONE VOLTAGE
NERO BLACK	BK	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	690 - 400 Vac
ROSSO RED	RD	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	230 Vac
BLU BLUE	BL	CONDUTTORE DI NEUTRO (identificato tramite marcatura) NEUTRAL WIRE (identified by marking)	230 - 400 Vac
GIALLO/VERDE YELLOW/GREEN	GN/YE	CIRCUITO DI PROTEZIONE PROTECTION EARTH	--
ROSSO RED	RD	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE ALTERNATA ALTERNATING CURRENT CONTROL CIRCUITS	230 - 24 Vac
BLU BLUE	BL	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE CONTINUA DIRECT CURRENT CONTROL CIRCUITS	24 Vdc
BIANCO WHITE	WH	SEGNALI ANALOGICI ANALOG SIGNALS	--
AZZURRO LIGHT BLUE	LB	CIRCUITI A SICUREZZA INTRINSECA INTRINSICALLY SAFE CIRCUITS	--
VERDE GREEN	GN	CIRCUITO DI PROTEZIONE A SICUREZZA INTRINSECA INTRINSICALLY SAFE PROTECTION EARTH	--
ARANCIO ORANGE	OG	CIRCUITO NON SEZIONATO UNSECTIONED CIRCUIT	--

REMAZEL ENGINEERING
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e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
INCOMING POWER LINE

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 30

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

30 L1 [L1] [L1] L1 34
30 L2 [L2] [L2] L2 34
30 L3 [L3] [L3] L3 34
30 N [N] [N] N 34
30 PE PE 34

[L1] [L2] [L3] [N] 1,5 mm² BK x 3 + BL

[L1] [N] 1,5 mm² RD + BL + GN/YE

[L2] [N] 1,5 mm² RD + BL + GN/YE

32Q1 1 3 5 2 4 6 2A

32Q2 1 3 C 6A 2 4

32Q3 2A

32E1 Stigo ZR 011 11 12 23 24

1,5 mm² BK

[32-1] [32-1] [32-2] [32-3] [32-4]

[32-5] [32-6]

[32-7] [32-8]

66 32KA1 32HL1 32HL2 32HL3

32X1

32R1 32E2 M 1AC

400Vac VOLTAGE PRESENCE

ELECTRIC SOCKET

HEATER FAN

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ENCLOSURE SERVICE

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

SCALE : NTS

A3

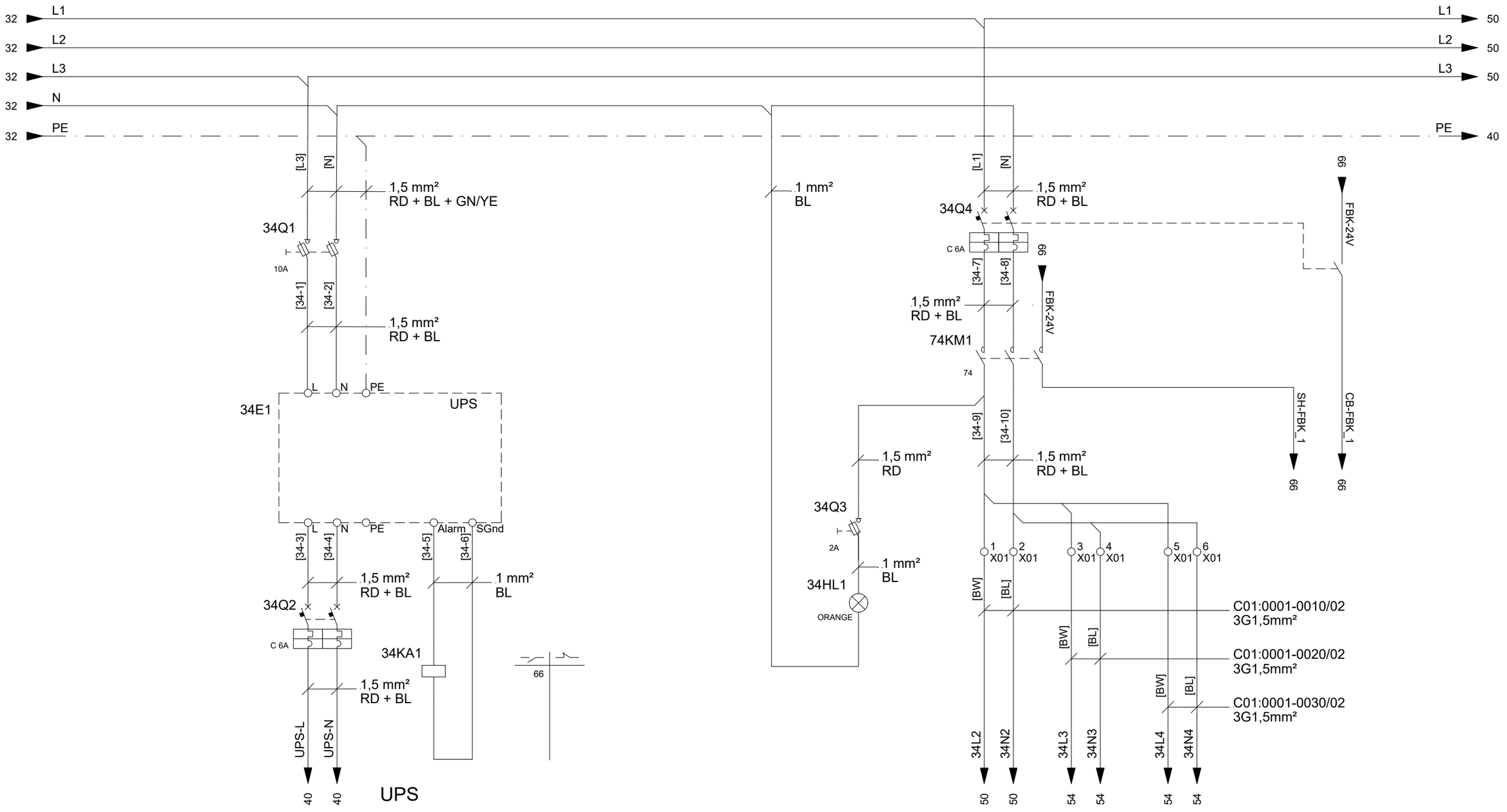
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 32

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



STANDSTILL HEATERS

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
UPS AND STANDSTILL HEATERS

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

SCALE : NTS

A3

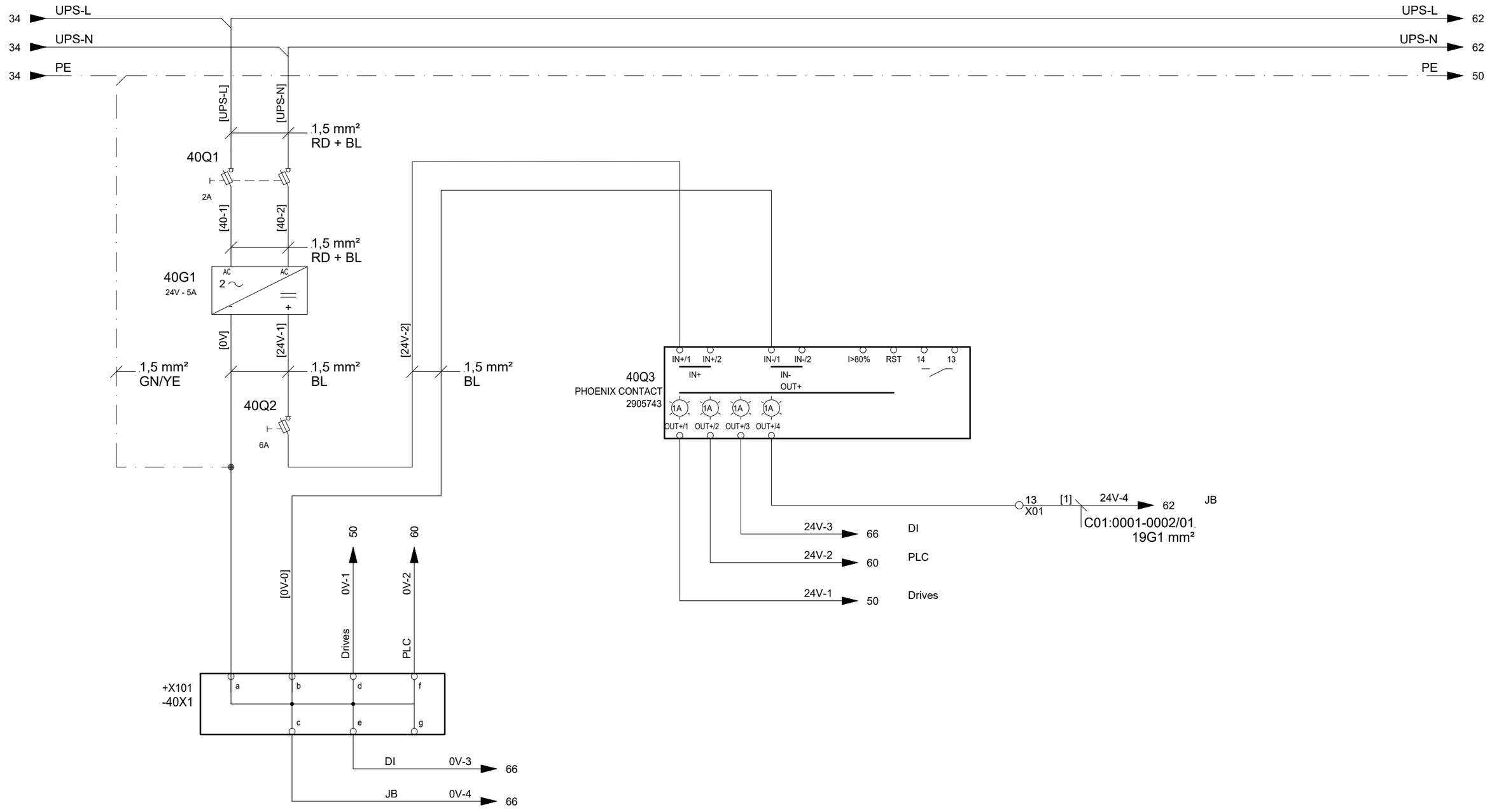
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 34

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
24Vdc SUPPLY

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

SCALE : NTS

A3

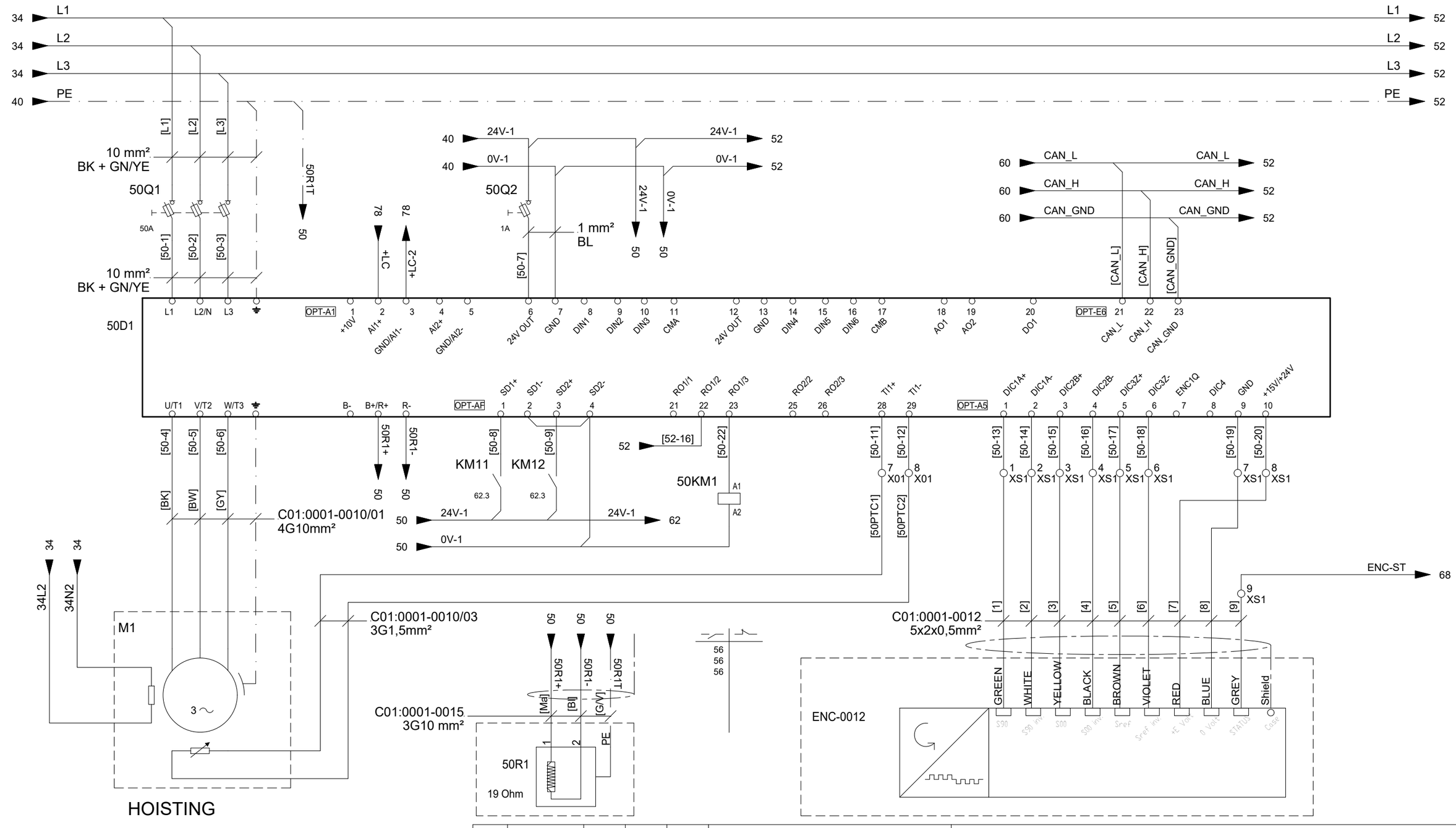
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 40

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING VFD CONNECTIONS

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

SCALE : NTS

A3

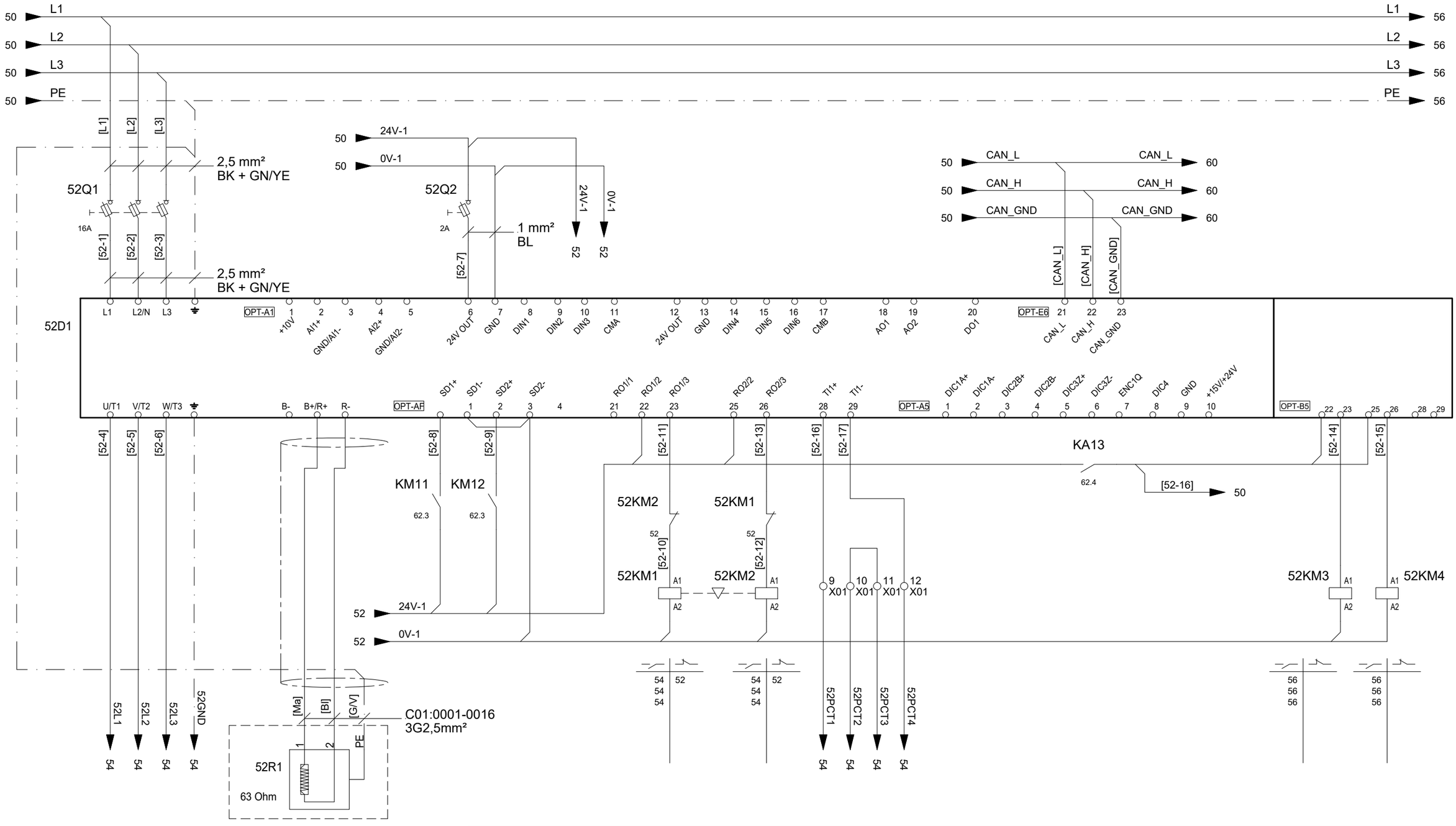
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 50

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY VFD CONNECTIONS

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

SCALE : NTS

A3

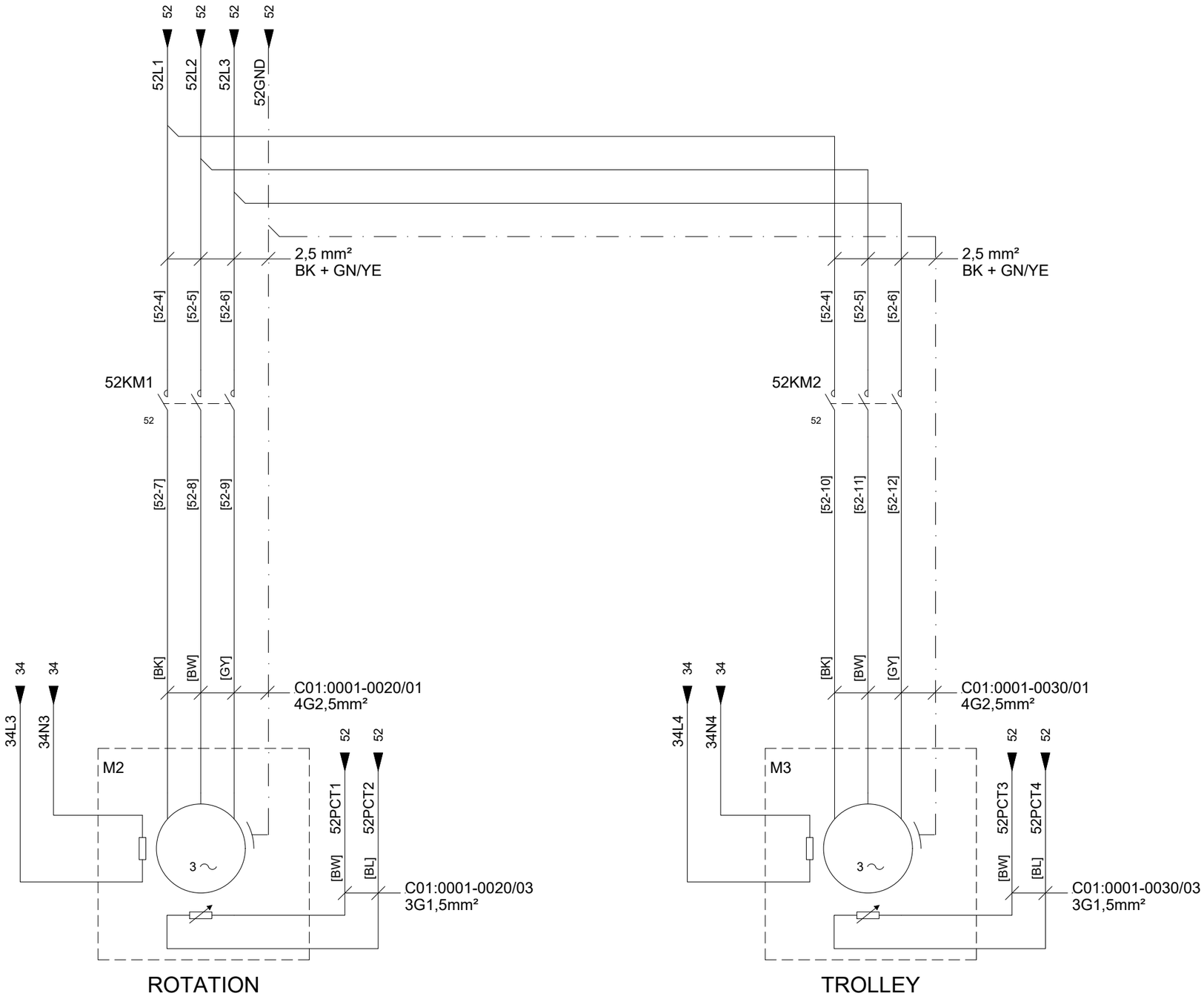
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 52

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY MOTORS

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

SCALE : NTS

A3

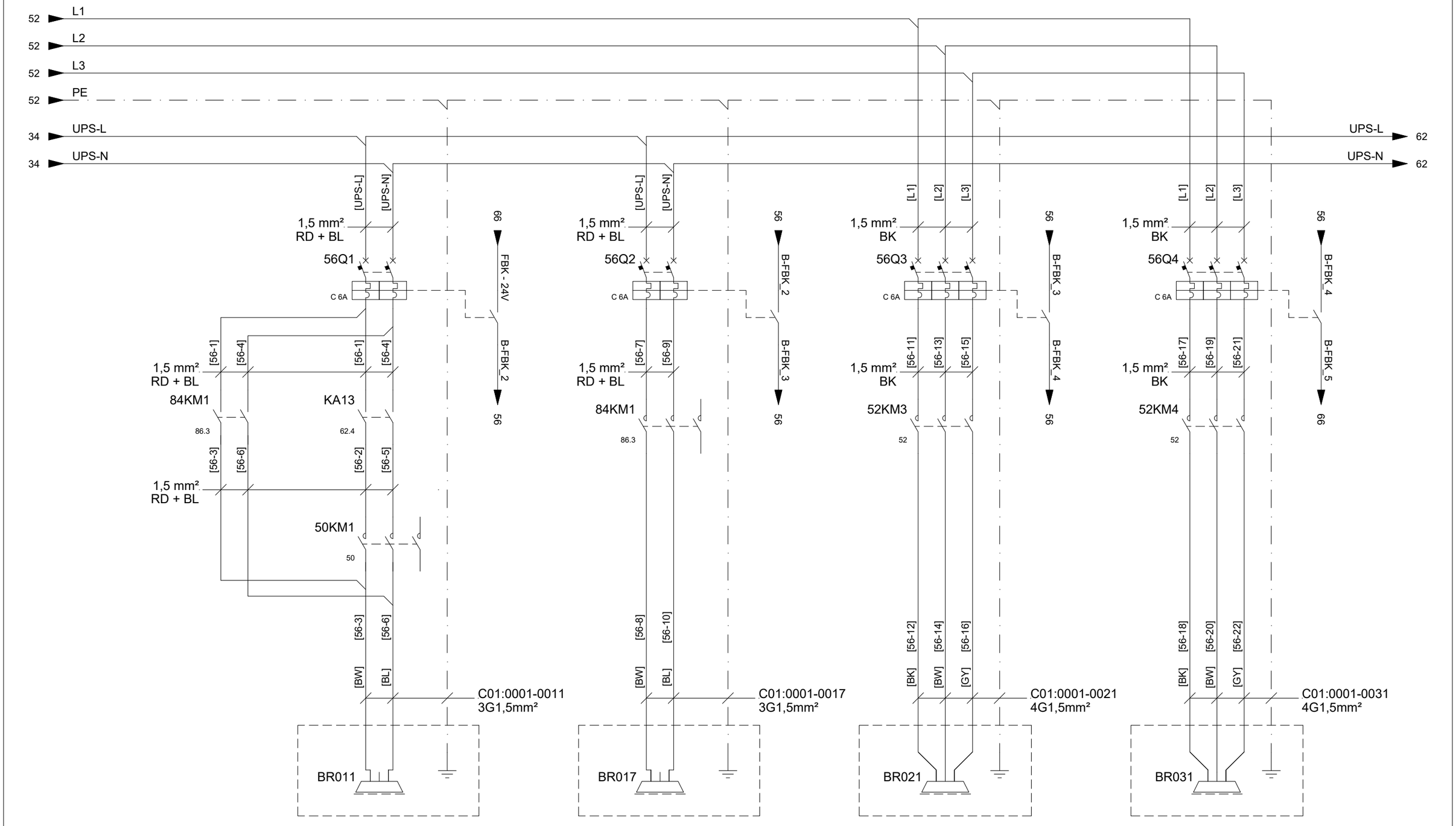
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 54

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOTOR BRAKES

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

SCALE : NTS

A3

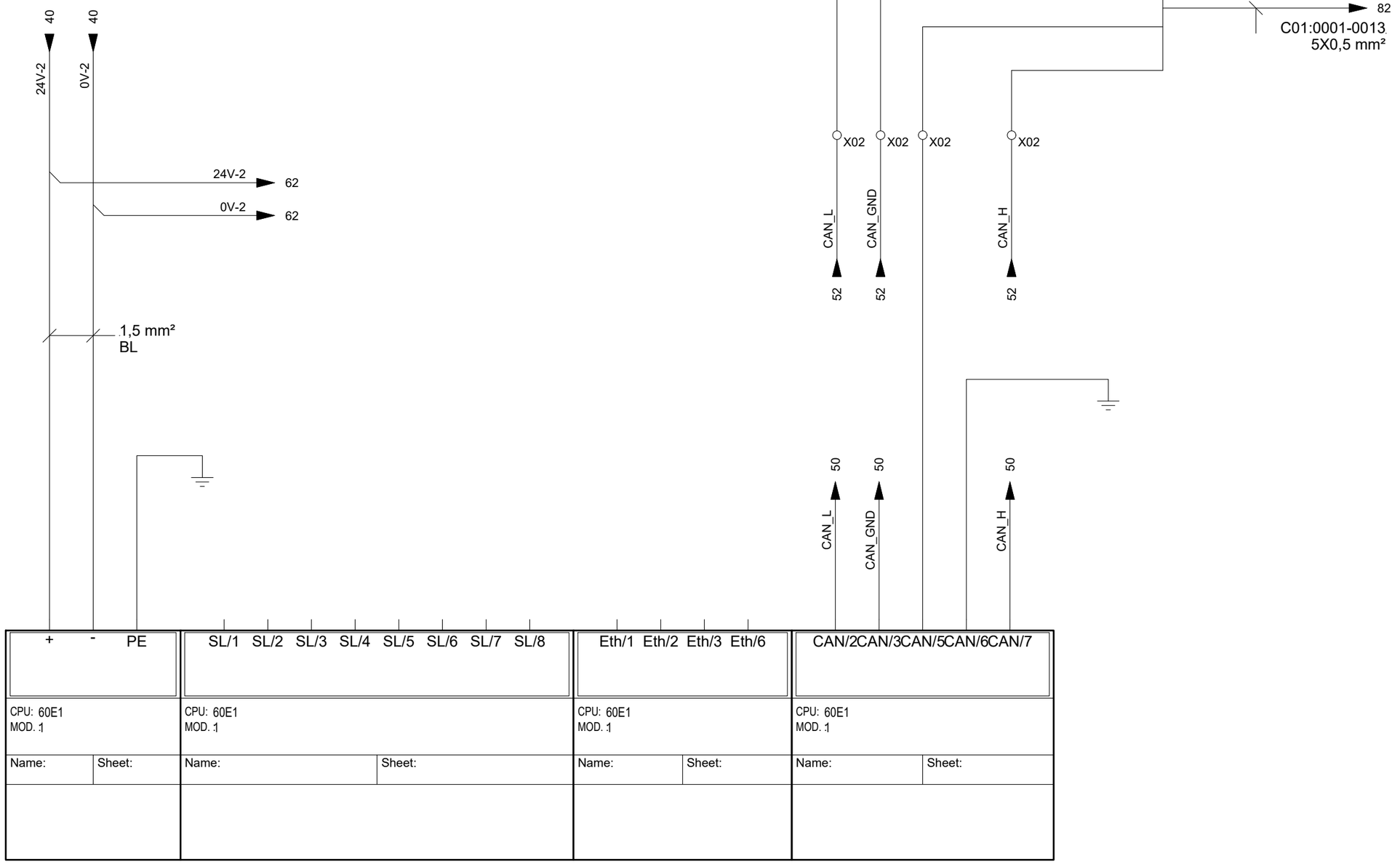
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 56

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



CPU

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
CPU

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

SCALE : NTS

A3

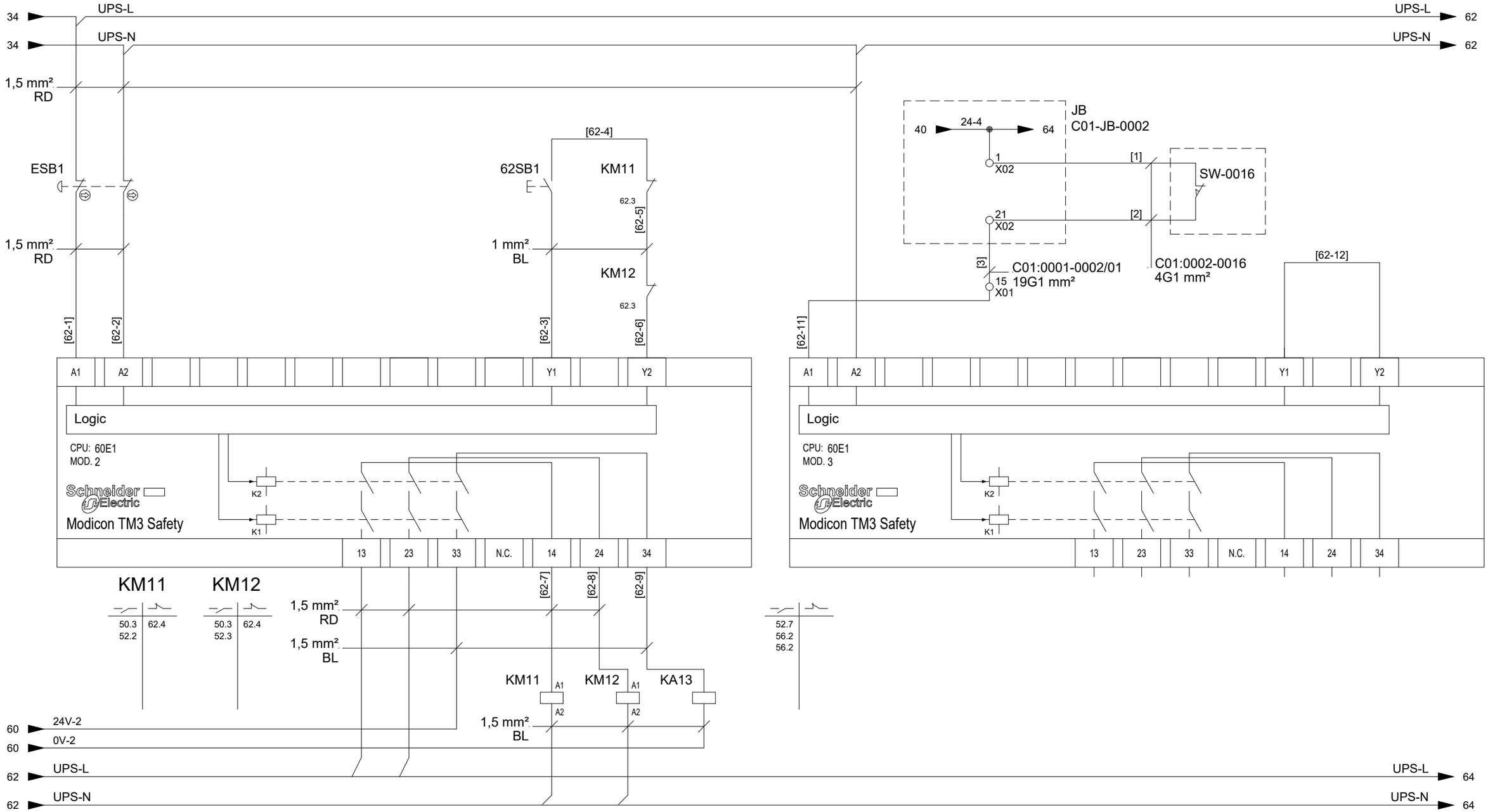
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 60

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



EESD

PAYOUT LIMIT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 62

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

62 UPS-L → UPS-L 64

62 UPS-N → UPS-N 64

JB
C01-JB-0002

62 → 66

2 X02 [1] SW-0036

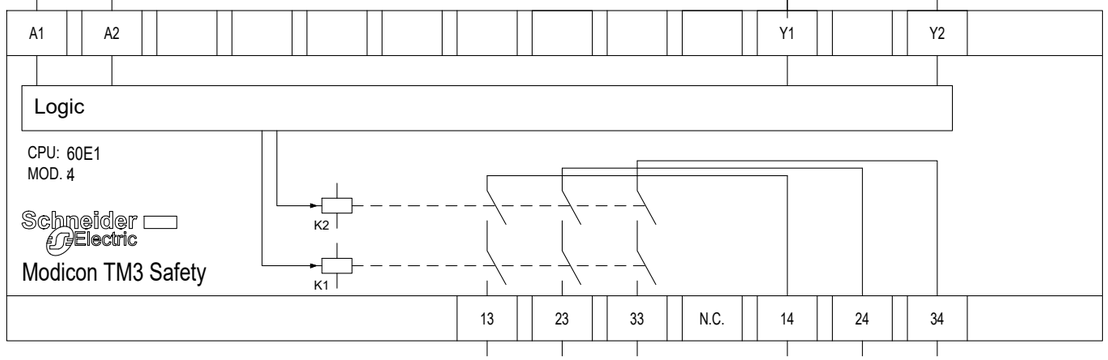
22 X02 [2]

[4] C01:0001-0002/01
16 19G1 mm²
X01

C01:0002-0036
4G1 mm²

[64-3]

[64-1]



64 UPS-L → UPS-L 86

64 UPS-N → UPS-N 86

A2B

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

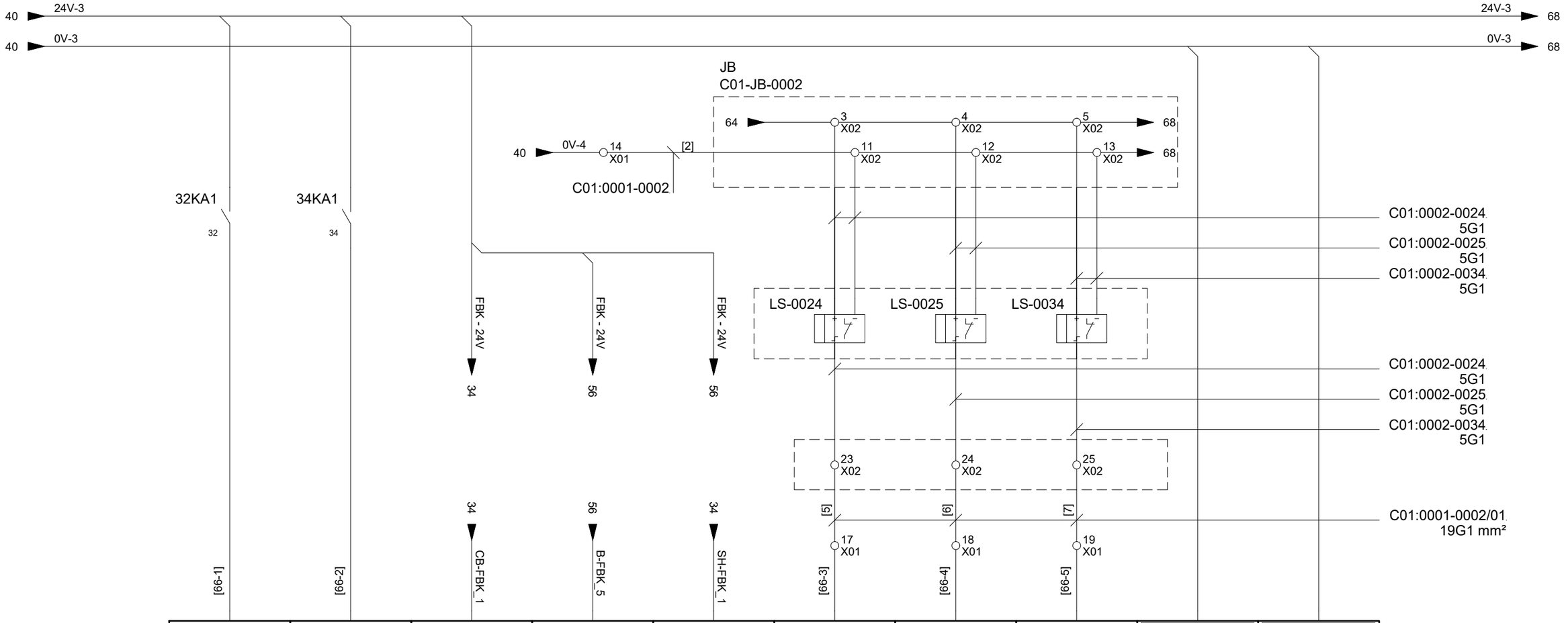
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 64

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
400Vac OK	UPS STATUS OK	CB FEEDBACK	BRAKE CB FEEDBACK	STANDSTILL HEATERS FEEDBACK	LIMIT SWITCH ROTATION CW	LIMIT SWITCH ROTATION CCW	LIMIT SWITCH TROLLEY TRAVELING FORWARD		

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

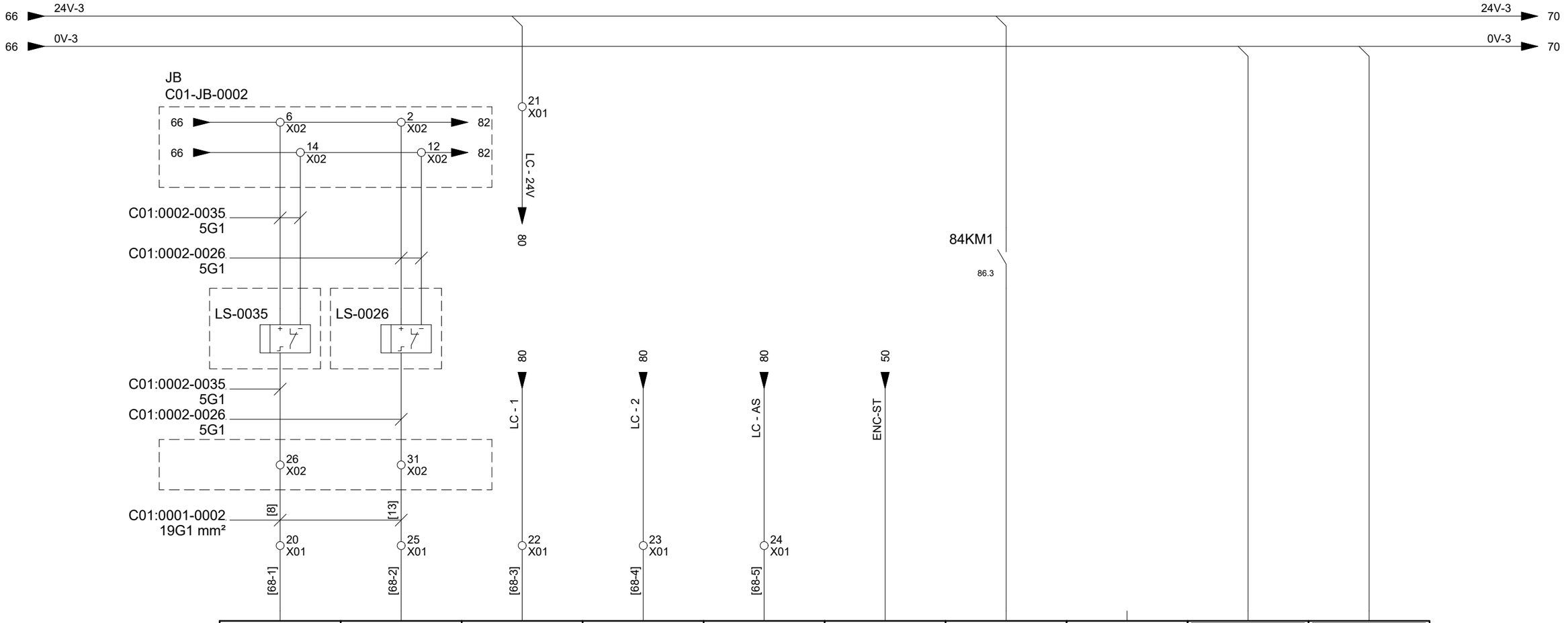
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 66 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
LIMIT SWITCH TROLLEY TRAVELING BACKWARD	LIMIT SWITCH BLOCK PIN	OVERLOAD 1st LIMIT	OVERLOAD 2nd LIMIT	ANTISLACK	HOISTING ENCODER STATUS	MOPS ACTIVE	SPARE		

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ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

SCALE : NTS

A3

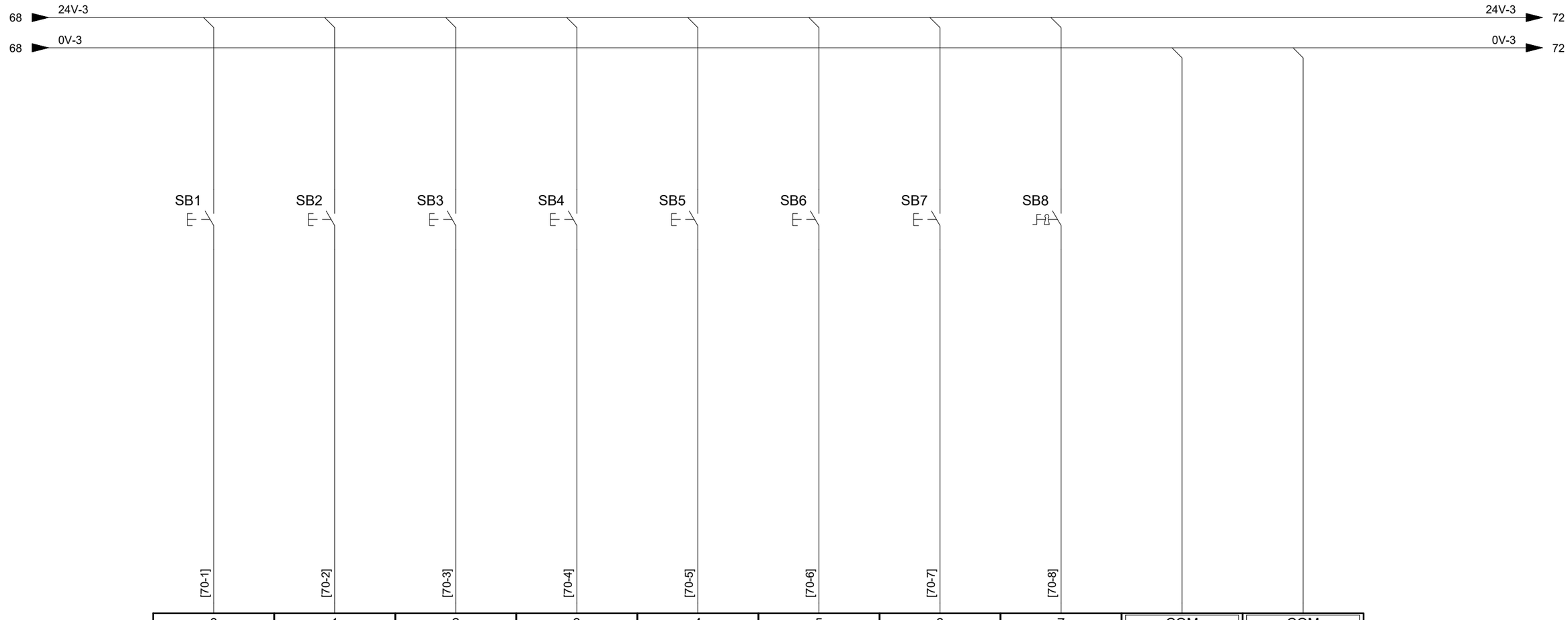
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 68

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
ROTATION CW PUSH BUTTON	ROTATION CCW PUSH BUTTON	TROLLEY TRAVELING FORWARD PUSH BUTTON	TROLLEY TRAVELING BACKWARD PUSH BUTTON	HOISTING UP PUSH BUTTON	HOISTING DOWN PUSH BUTTON	SECOND SPEED PUSH BUTTON	OVERLOAD BYPASS		

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 70 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

70 24V-3 → 24V-3 74

70 0V-3 → 0V-3 74

8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE		

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e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

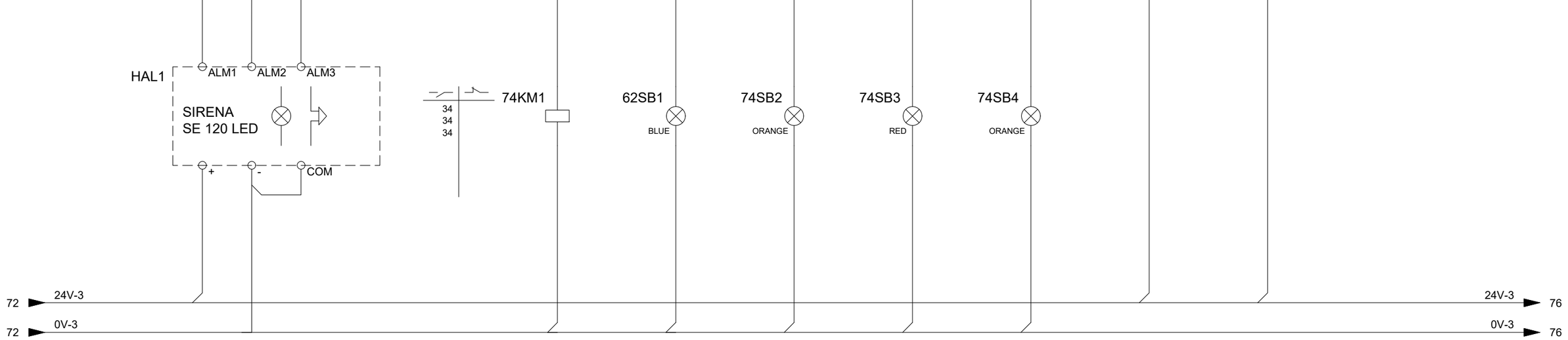
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 72 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

HORN COMAND		HORN STAGE 2		HORN STAGE 3		STANDSTILL HEATERS		RESET REQUEST		PIN ENGAGED		ALARM		OVERLOAD WARNING					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7	
0		1		2		3		4		5		6		7		COM0		COM0	



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e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 74

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

AOPS ACTIVATED		MOPS ACTIVATED		3.5 tonn LOAD LIMIT		1 tonn LOAD LIMIT		WARNING		SPARE		SPARE		SPARE					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7			
8		9		10		11		12		13		14		15		COM1		COM1	

76SB1 YELLOW

76SB2 YELLOW

76SB3 YELLOW

76SB4 YELLOW

76SB5 YELLOW

74 24V-3

74 0V-3

24V-3 78

0V-3 78

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e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

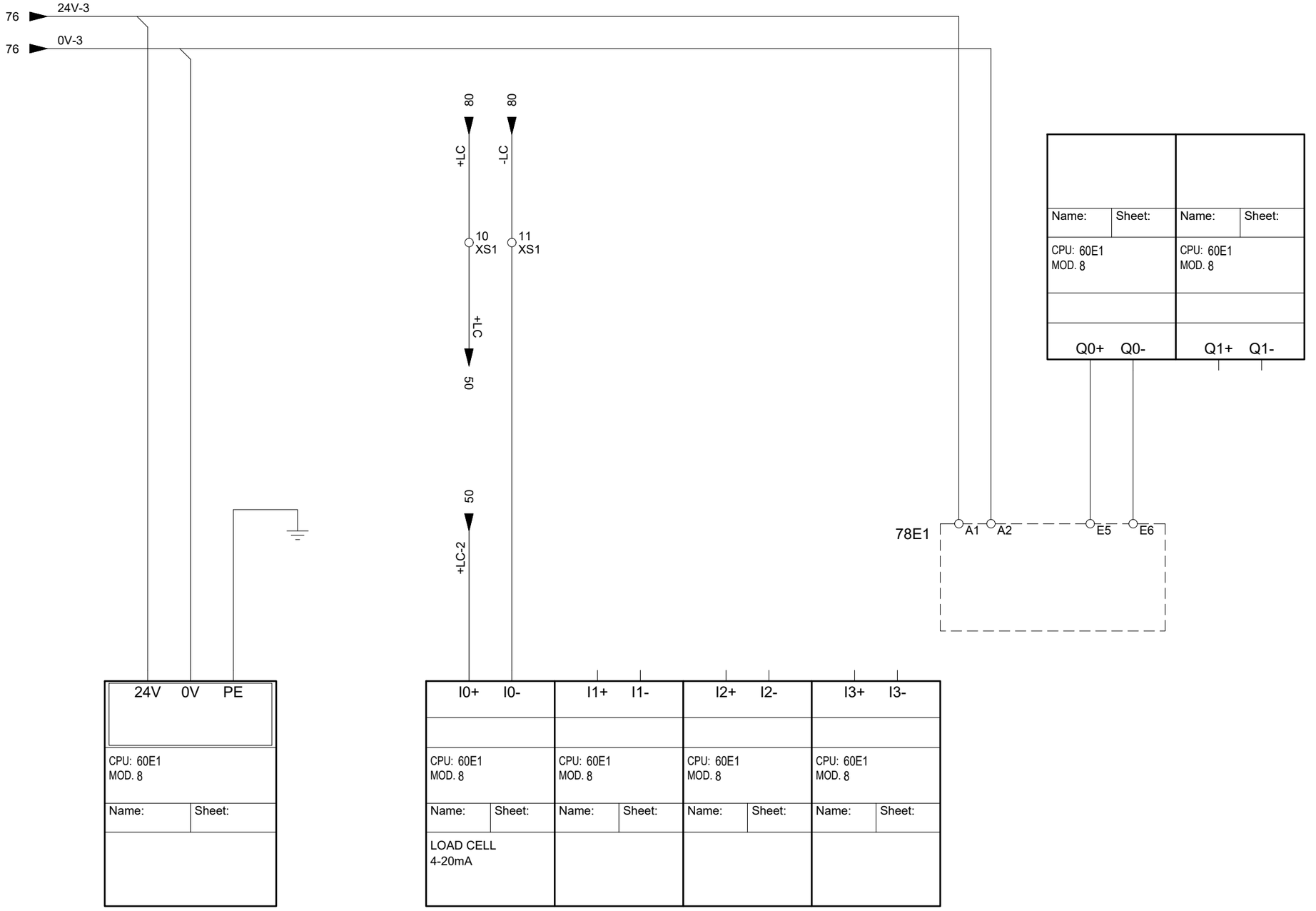
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 76

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ANALOG INPUT AND OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

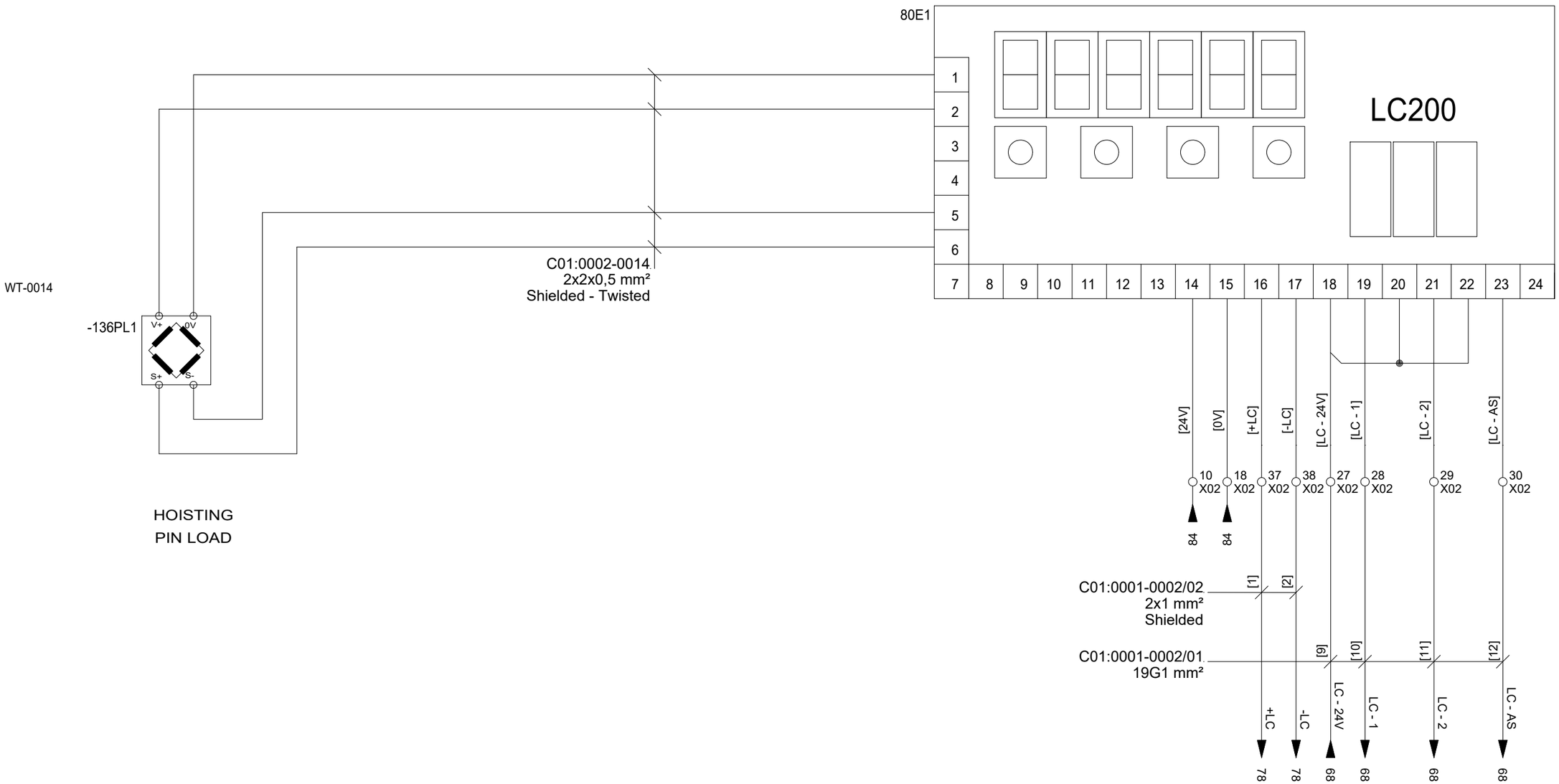
SHEET 78

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

LOAD CELL AMPLIFIER



HOISTING
PIN LOAD

LOAD CELL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
LOAD CELL

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

SCALE : NTS

A3

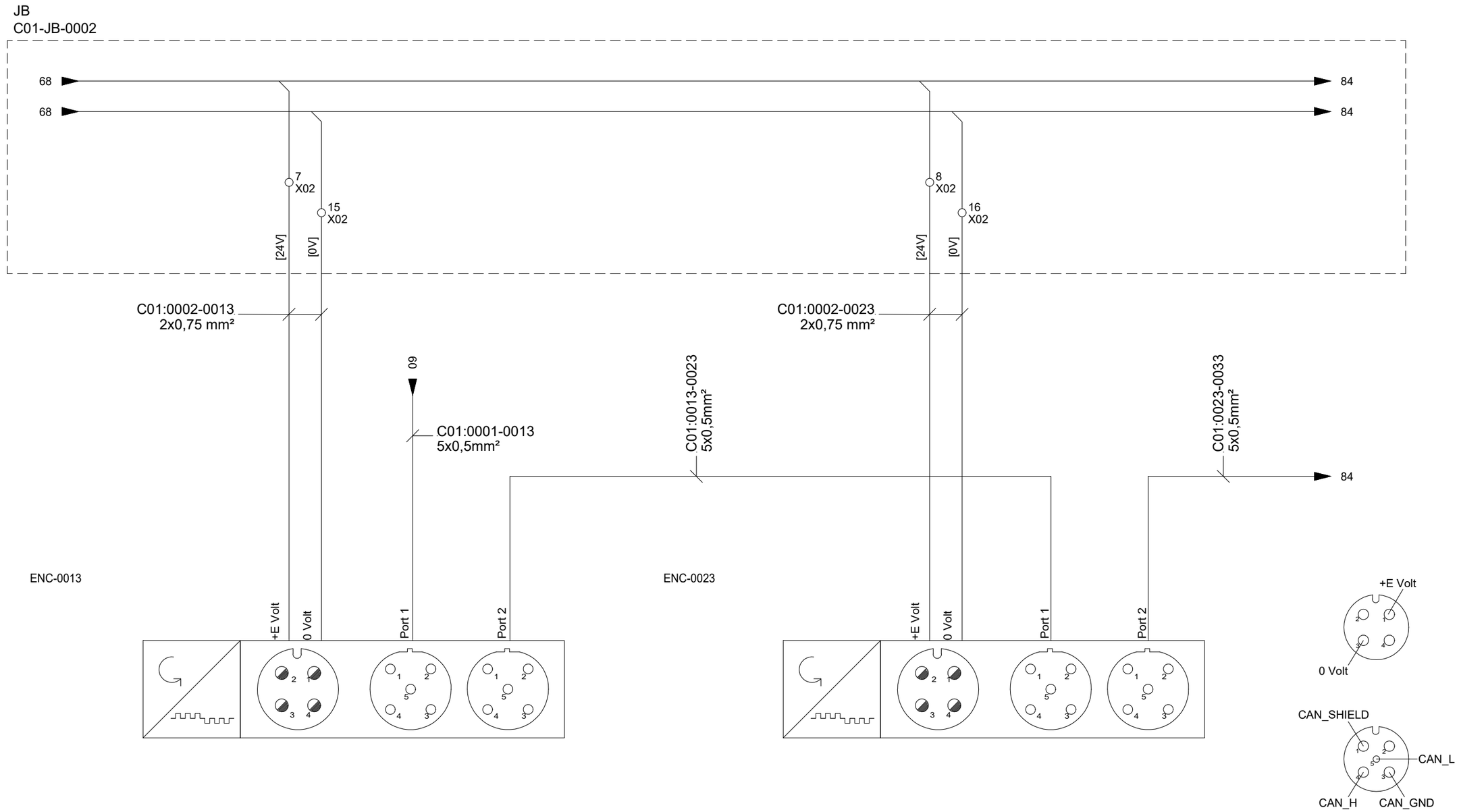
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 80

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING AND ROTATION ENCODERS

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

SCALE : NTS

A3

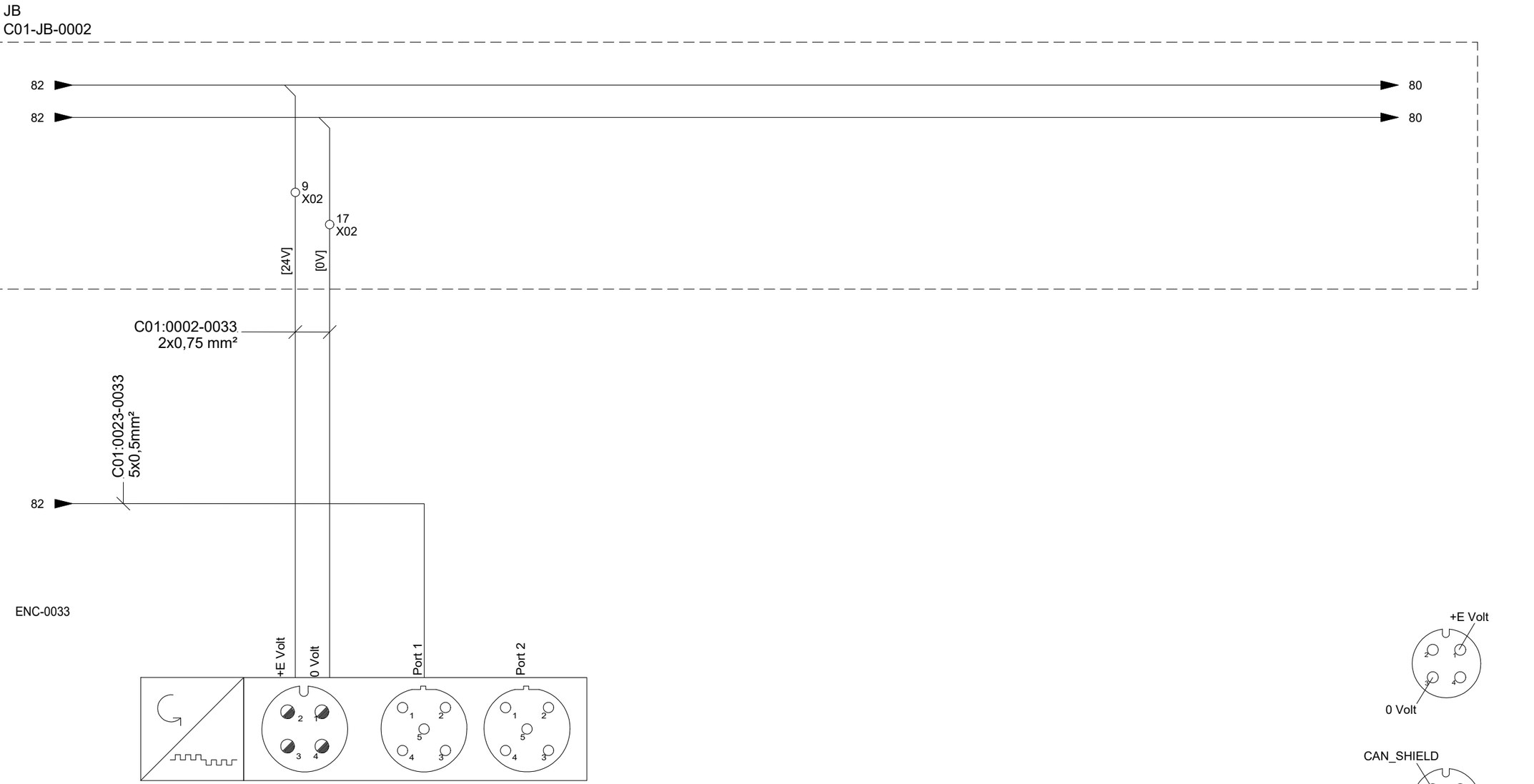
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 82

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

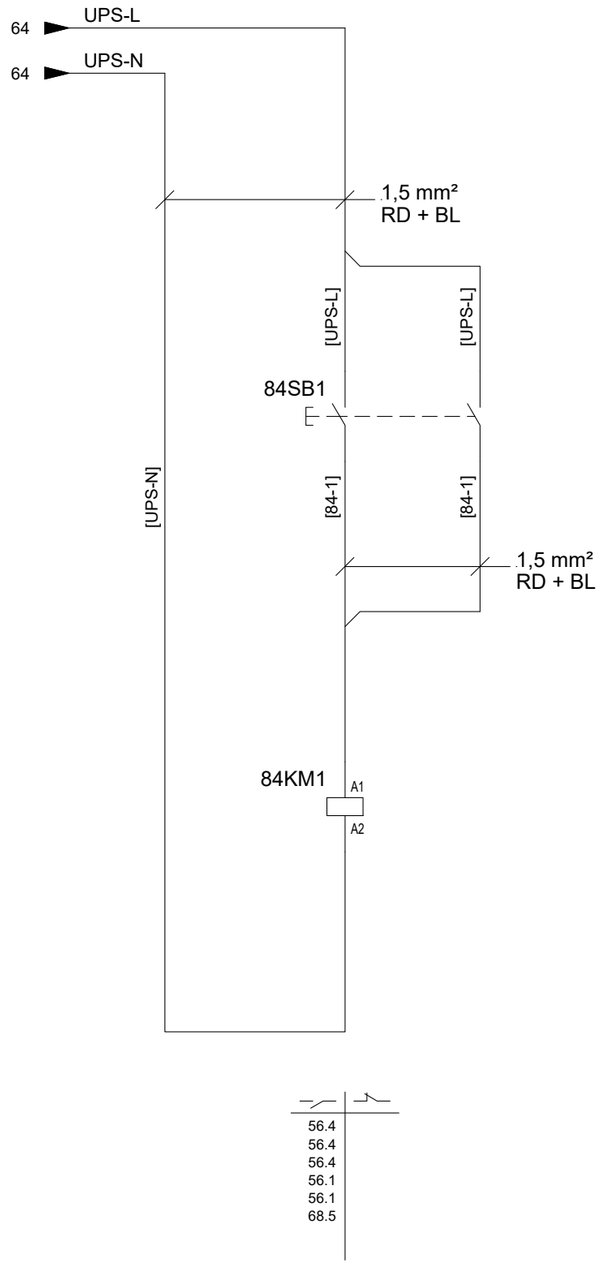
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TROLLEY ENCODER

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 84 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOPS COMMAND

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

SCALE : NTS

A3

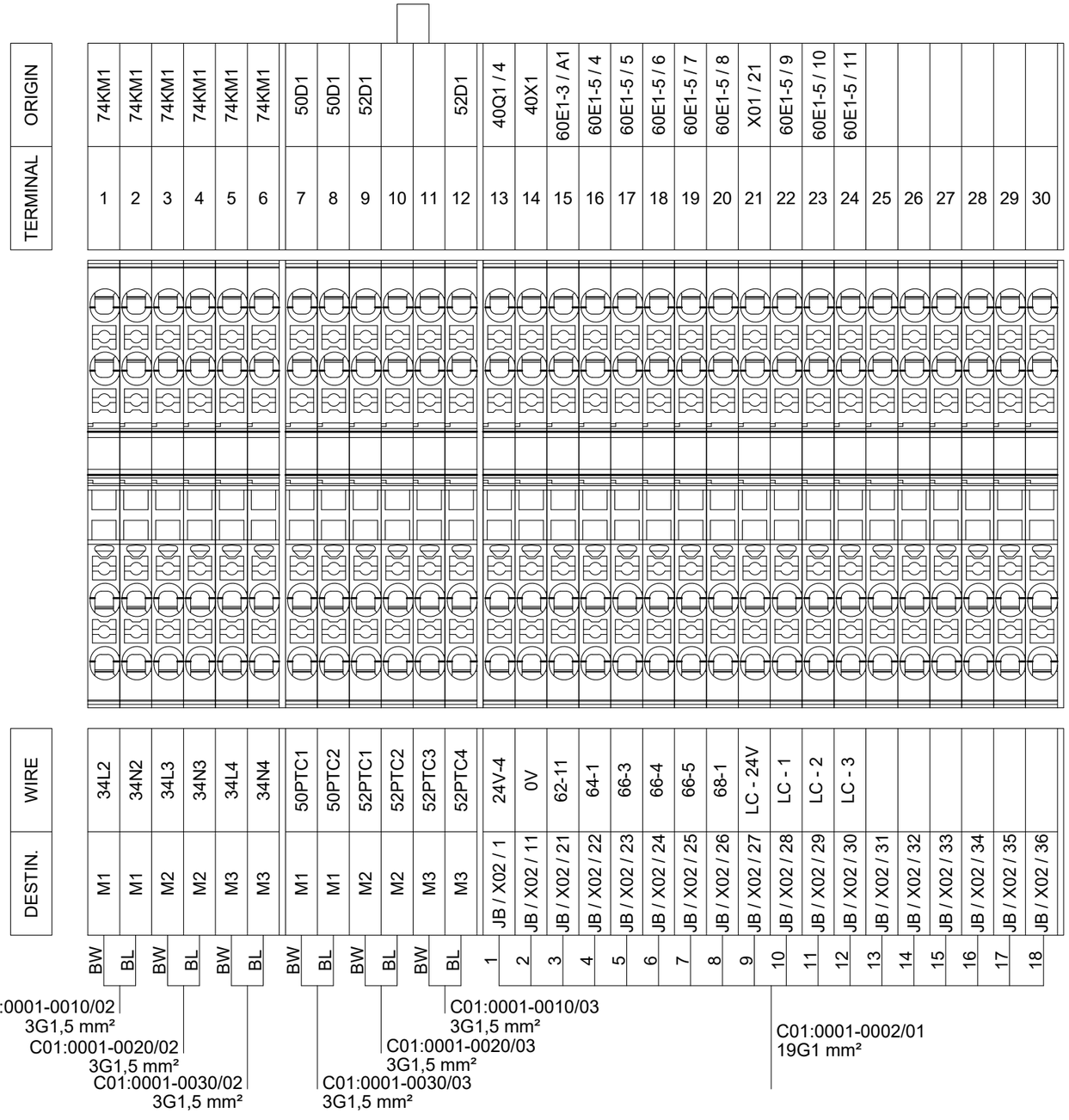
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 86

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP X01

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

SCALE : NTS

A3

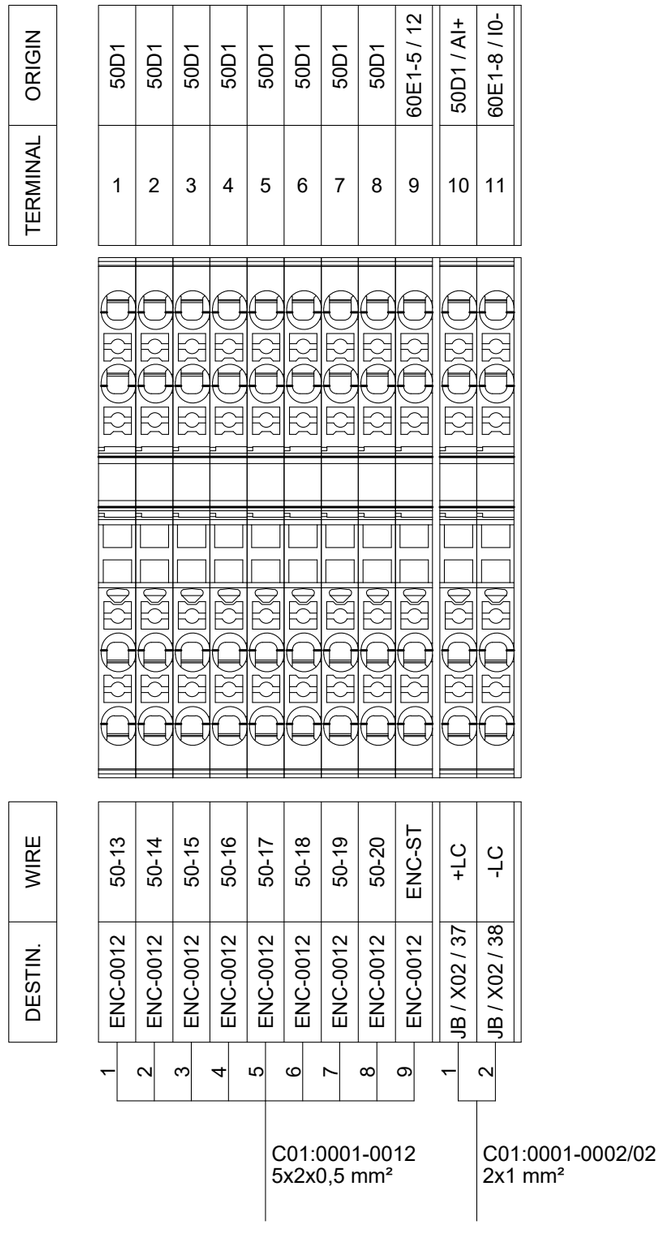
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 90

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP XS1

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 92 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

TERMINAL	ORIGIN
1	SW-0016
2	SW-0036
3	LS-0024
4	LS-0025
5	LS-0034
6	LS-0035
7	ENC-0013
8	ENC-0023
9	ENC-0033
10	80E1 / 14
11	LS-0024
12	LS-0025
13	LS-0034
14	LS-0035
15	ENC-0013
16	ENC-0023
17	ENC-0033
18	80E1 / 15
19	
20	
21	SW-0016
22	SW-0036
23	LS-0024
24	LS-0025
25	LS-0034
26	LS-0035
27	
28	80E1 / 19
29	80E1 / 21
30	80E1 / 23
31	LS-0026
32	
33	
34	
35	
36	
37	80E1 / 16
38	80E1 / 17

WIRE	DESTIN.
24V-4	X01 / 13
24V-4	LS-0026
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
0V	X01 / 14
0V	LS-0026
0V	
0V	
0V	
0V	
0V	
0V	
62-11	X01 / 15
64-1	X01 / 16
66-3	X01 / 17
66-4	X01 / 18
66-5	X01 / 19
68-1	X01 / 20
LC - 24V	X01 / 21
LC - 1	X01 / 22
LC - 2	X01 / 23
LC - 3	X01 / 24
68-2	X01 / 25
	X01 / 26
	X01 / 27
	X01 / 28
	X01 / 29
	X01 / 30
+LC	50D1 / AI+
-LC	60E1-8 / I0-

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 1 2

C01:0001-0002/01
19G1 mm²

C01:0001-0002/02
2X1 mm² shielded

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP JB / X02

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 94

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

ITEM	Tag	X-99001	: Lifting Davit			Dwg	123A90-DDL-EL-DL-20100
	S/Sys	99-00	: Crane			Module	UD
TASK	code	C10002360		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Electrical	Form	CZX01E Package - E

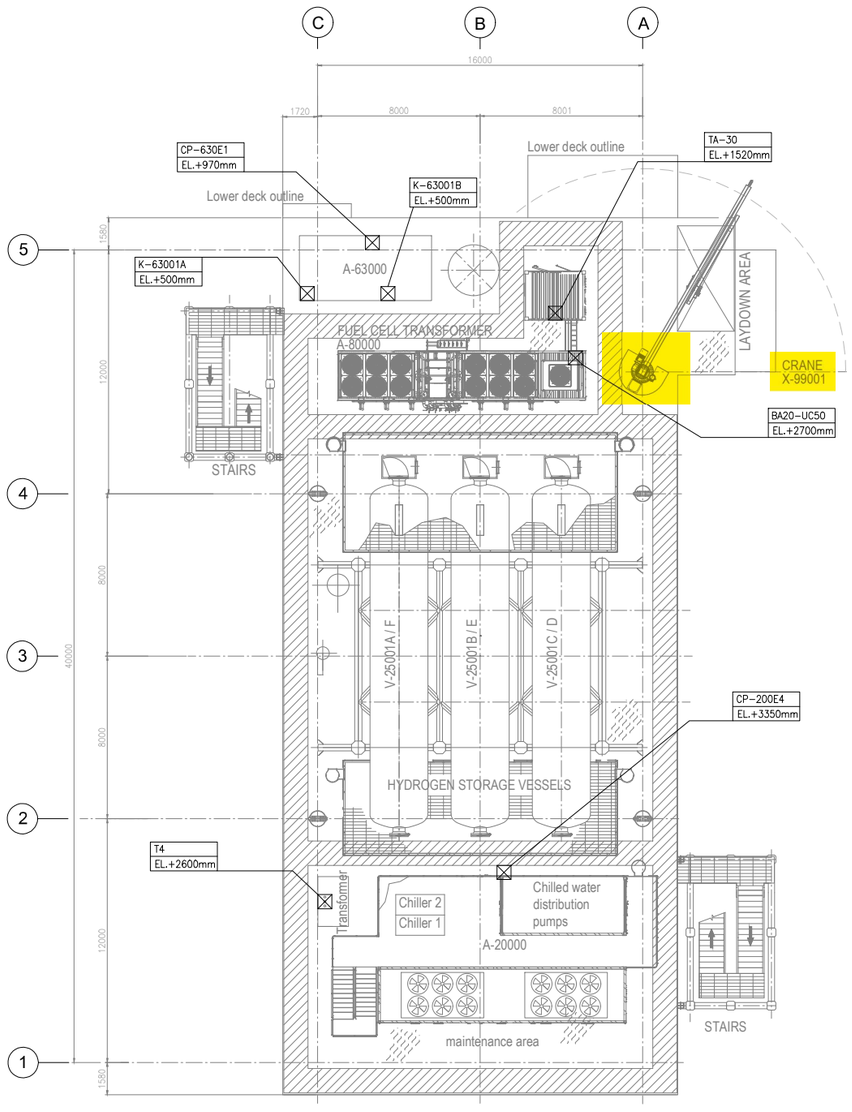
1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	OK
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	PL
4	Check that all equipment has been earthed and bonded.	OK
5	Check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

Comments:

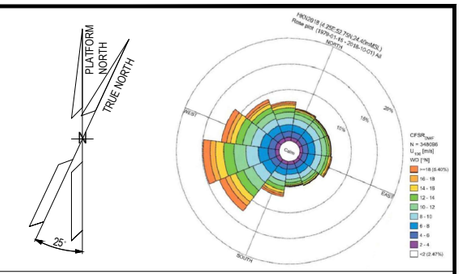
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-02	2025-04-03	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-02T12:19:25.987Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-03T14:12:15.098Z	

DRAWING NO. 123A90-DDL-EL-DL-20100

REV. 01



PLAN ON TOP DECK
EL+30.310 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. UNLESS NOTED OTHERWISE.
4. AFTER INTERFACE PANEL/BATTERY LIMIT CABLES WILL BE ROUTED INSIDE VENDOR CABLETRAYS

LEGEND

⊠	INTERFACE PANEL/BATTERY LIMIT
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-20140	ELECTRICAL HEAT TRACING JUNCTION BOX LAYOUT
123A90-DDL-EL-DL-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	22/07/24	SPS	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)
ELECTRICAL EQUIPMENT LAYOUT
TOP 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 22/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20100	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20100**

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

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20100-Electrical Equipment Layout – Top Deck

DRAWING NO. 123A90-DDL-EL-DL-20132

REV. 01

RLMU LIST

REV. 01_B: Sheet 1, 3

PL=01



PL=01 E.B. non installato.
é stato eseguito sparo.
modifica da E13 ad E11E+E11A

PL=01 E.B. not installed.was installed the HILTI (S-BT-ER-M10-HC-120). change from E13 to E11E+E11A

E.B. non instalato (Eseguito sparo)
---
not installed.was installed the HILTI (S-BT-ER-M10-HC-120). change from E13 to E11E+E11A

35mmq

PL=08 IL collegamento è diverso da quanto indicato dal documento.
modifica da E13 ad E11E+E11C

PL=08 E.B. not installed.as the typical. change from E13 to E11E+E11C

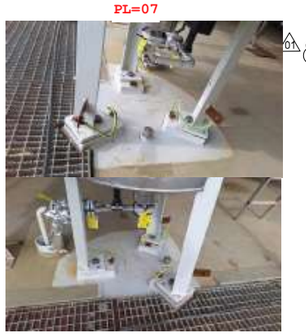
PL=08



PL=07 i collegameti sono diversi da quanto evidenzia il documento in campo connessione su' 3 punti.
le connessioni uttilizzate sono E11C+E11E

PL=07 Connected three wires on same point.See typical E11C+ E11E.

PL=07



E.B. non installato

Not installed

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

PL=02 E.B. non installato.
Scala saldata su struttura.

PL=02 ,E.B Not installed. Ladder welded on structure.

PL=02



PL=09 intallazionè diversa da tipico.
reale installato(E11A+E11E).

PL=09 not installed.as the typical. change from E13 to E11A+E11E

PL=09

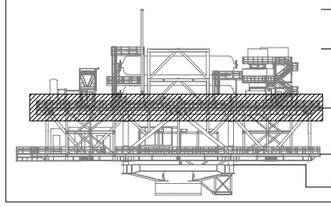


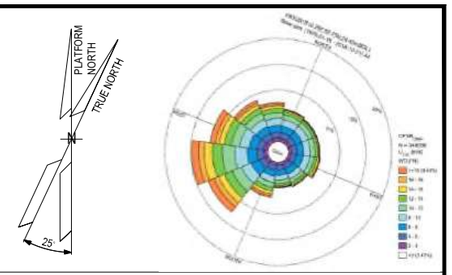
VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_B	08/11/24	V.Ramponi

ROSETTI MARINO SpA

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. LADDER MUST BE EARTHED IF NOT WELDED TO THE STRUCTURE. LADDER MUST BE EARTHED TO THE UPPER BEAM OF THE STRUCTURE, COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS AS PER TYPICAL E17D.
9. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D.
10. ALL POLE MOUNTED EQUIPMENTS WILL BE EARTHED AS PER TYPICAL E05.
11. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE
12. EARTHED VESSELS V-25001D/E/F. FOR EARTHING V-25001A/B/C SEE SHEET 2 01

LEGEND

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

TYP. / ELE / SIZE	TYPICAL / ELEVATION
E20 / ELE / HEIGHT	AIR TERMINATION ROD NO. / ELEVATION

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP 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-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/05/24	NLK	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

SHEET 001 OF 002

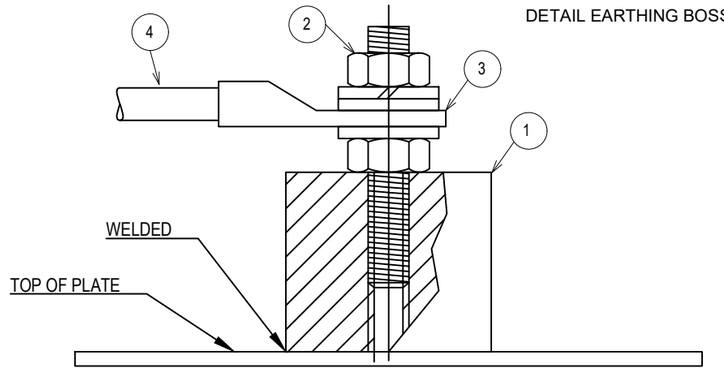
CONTRACT NO./TITLE			SCALE
CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			1:150
DRAWN NLK	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 31/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20132	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20132

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

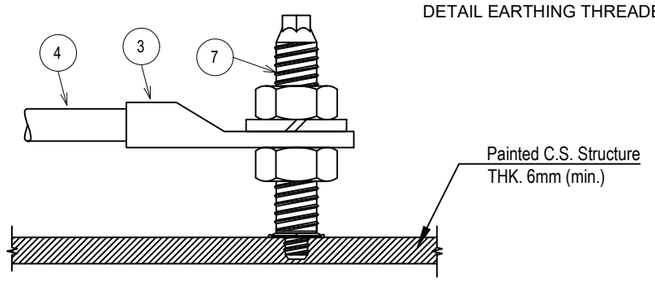


E11D

SEE NOTE 6

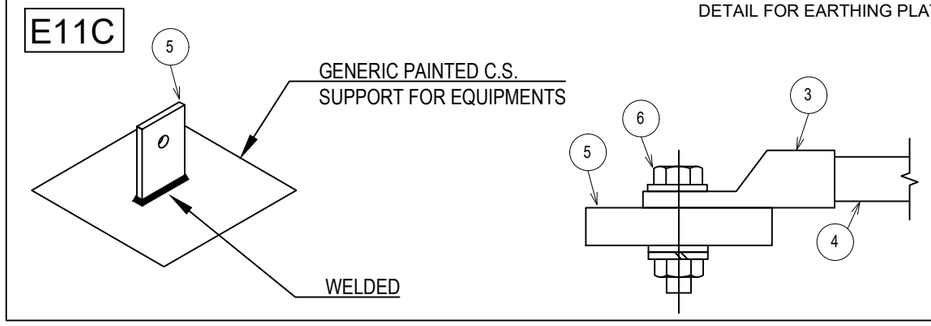
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

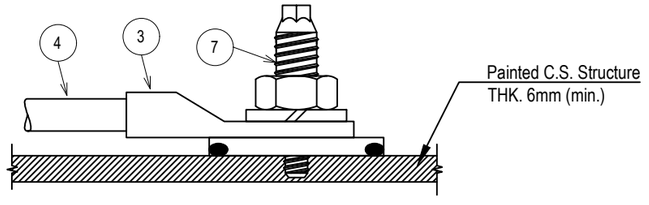


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

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
SINGLE EARTHING CONNECTION

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

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

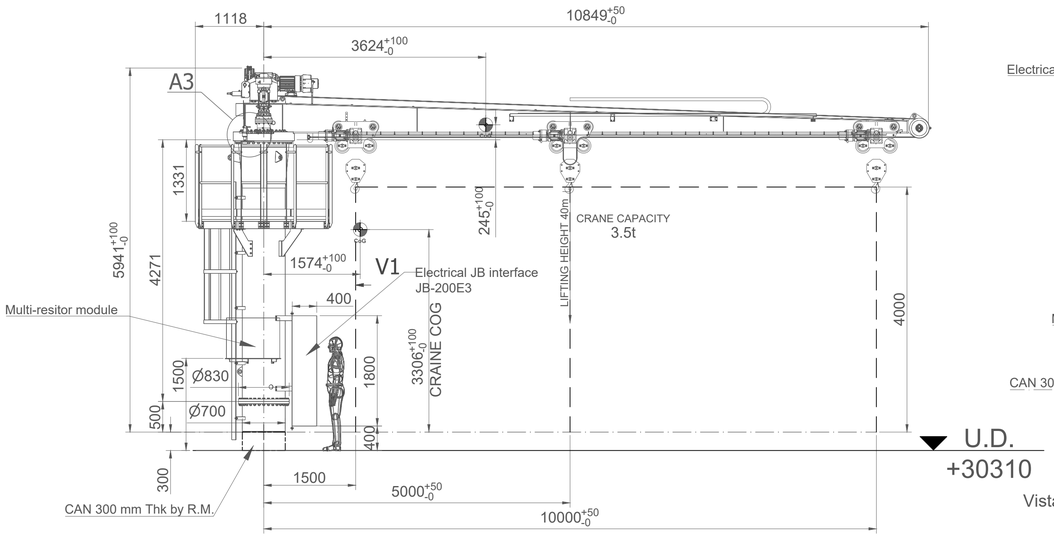
SHEET 003

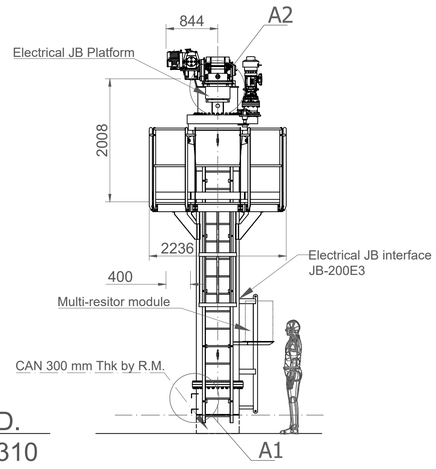
REV. 02

F.to UNI A3: 420mmx297mm

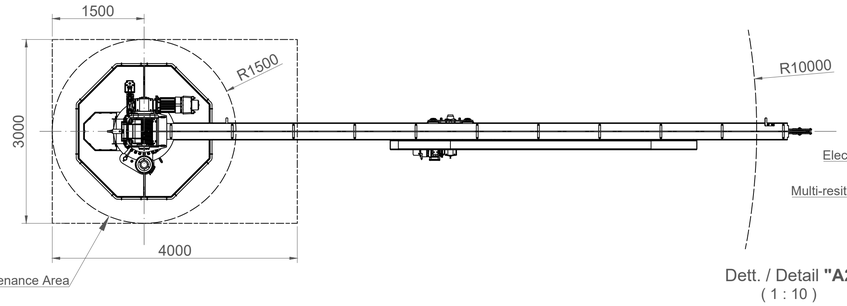
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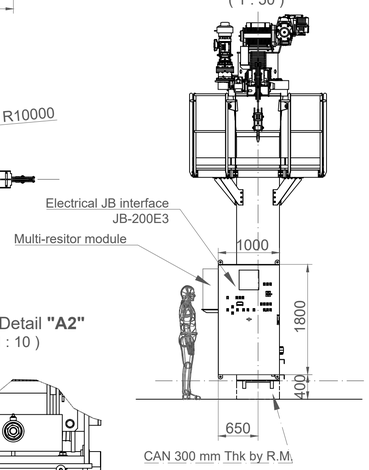
DRAWING NO. 1724001010-MAC-DA-00009 REV. 4

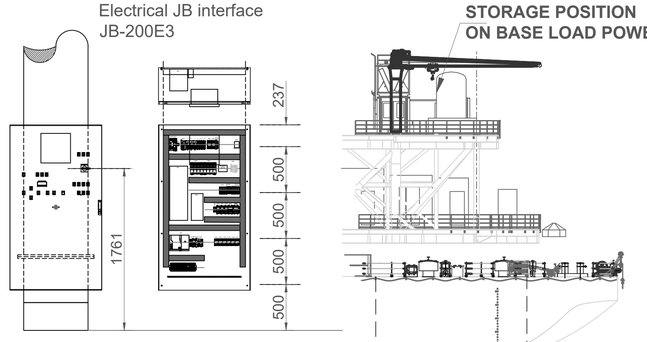




Vista da / View from **"V1"**
(1 : 50)

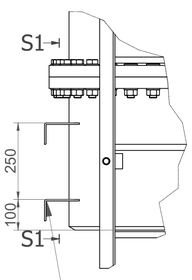






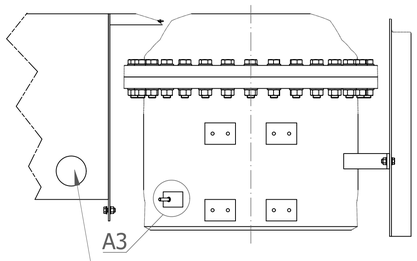
STORAGE POSITION
ON BASE LOAD POWER HUB

Dett. / Detail **"A1"**
(1 : 10)



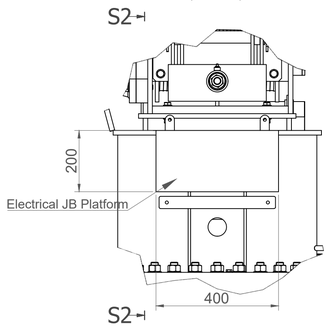
WELDED "L" PROFILE
For supports cable ladder

Sez. / Sec. **"S1-S1"**
(1 : 10)

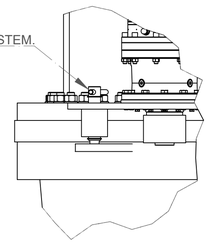


EL. CABLE IN DN32
For cable by R.M.

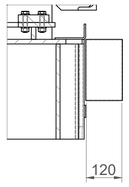
Dett. / Detail **"A2"**
(1 : 10)



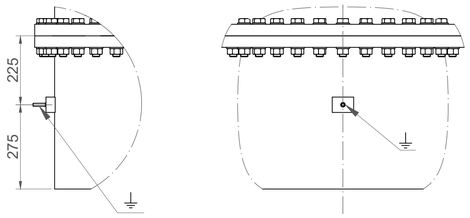
Dett. / Detail **"A3"**
(1 : 10)



Sez. / Sec. **"S2-S2"**
(1 : 10)



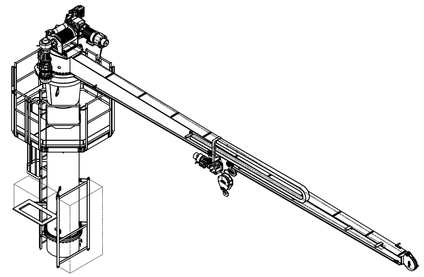
Dett. / Detail **"A3"**
(1 : 10)



EARTING POINT
Threaded stud, Ø16mm, L.30mm, material S355J2+N

Material :
S355 J2+N

Painting Color :
RAL Code: 7038.



EL.	Description Eng	MATERIAL	Q.TY	WEIGHT
3	Travelling Trolley Assembly	S 355 J2+N UNI EN 10025	1	256,01 kg
2	Boom Assembly	S 355 J2+N UNI EN 10025	1	2542,26 kg
1	Fixed Column Ass.	S 355 J2+N UNI EN 10025	1	1241 kg

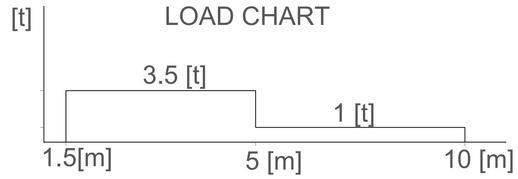
Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

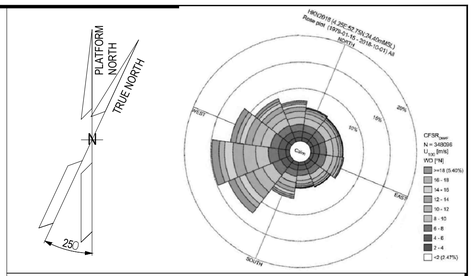
Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)

Test load:

5.6[t]x5[m] - 1.6[t]x10[m]
in according to DNV-ST-0378 rules



Description	Q.ty	Notes
CRANE TYPE		PLATFORM CRANE OFF-SHORE
LIFTING CAPACITY	3.5[t] 1.5-5[m] 1[t] 1.5-10[m]	STEEL ROPE HOIST WINCH
HOOK STROKE	40[m]	Electric driven by gearbox Brake on the El. Motor
LIFTING SPEED	3.75/15[m/min]	Variable speed motor
Hoist winch stroke (radial movement)	1.5-10[m]	Eletric driven rack - pinion system
RADIAL SPEED	2-8[m/min]	
PRELIMINARY WEIGHT	6000[kg]	
ROTATIONAL MOVEMENT	0-180°	By electric Motor Geqarbox Pinion on slewing bearing
ROTATIONAL SPEED	0.25/0.5[rpm]	Variable speed motor
WORKING TEMPERATURE	-9/45[°C]	
HAZAEDOUS AREA:		SAFE AREA
PERSONEL LIFT		NO
POWER SUPPLY	400[v]/3Ph/50[hZ] (3Ph+N)	
TOTAL POWER ABS.	20[kW]	



NOTES

LEGEND

HOLDS

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e-mail: info@remazel.com / website: www.remazel.com

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	05/11/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
3	20/09/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
2	21/08/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

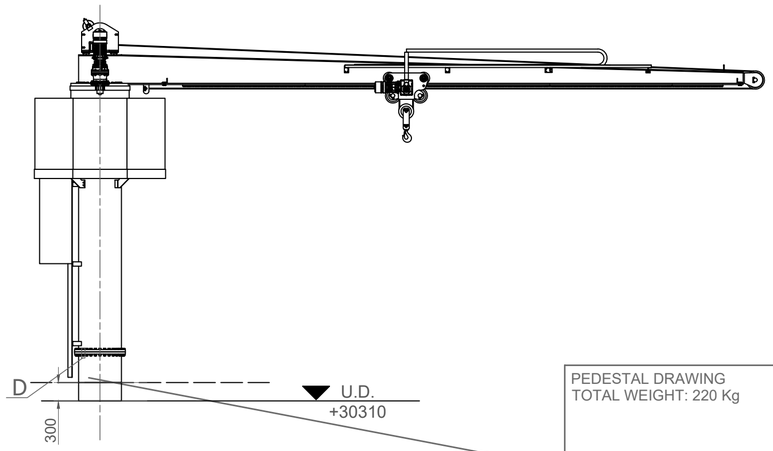
TITLE : 123A90A – Base Load Power Hub Platform
CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE	18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00009		SHEET 001	REV. 4

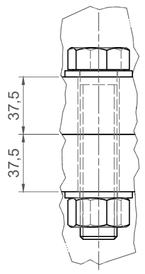
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DRAWING NO. 1724001010-MAC-DA-00010

REV. 1

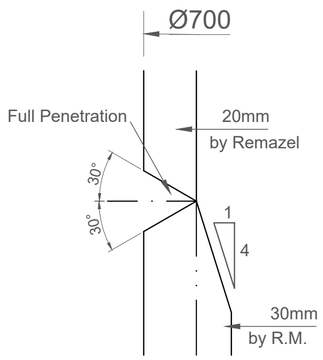


Dett. / Detail **"D"**
(1 : 2)

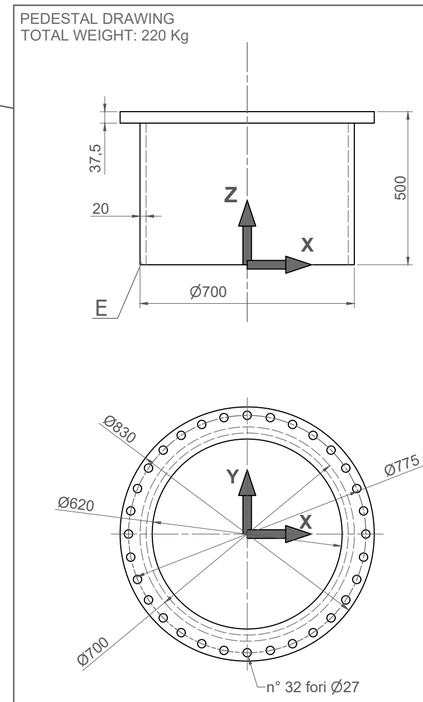


-n° 32 screws M24 - class 10.9

Dett. / Detail **"E"**



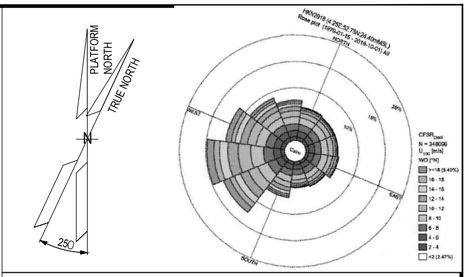
PEDESTAL DRAWING
TOTAL WEIGHT: 220 Kg



Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)



NOTES

LEGEND

HOLDS

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e-mail : info@remazel.com / website : www.remazel.com

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 123A90A – Base Load Power Hub Platform
PEDESTAL ADAPTOR CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE 18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00010	SHEET 001	REV. 1

File Name : 1724001010-MAC-DA-00010

BASE LOAD POWER HUB (BLPH)

DAVIT CRANE

WIRING DIAGRAM

REMAZEL ENGINEERING
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e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	1724001010-MAC-DG-00012	1	03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	1	FRONT PAGE	
02	2	SUMMARY and GENERAL NOTES	
02	10	SYMBOLS LEGEND	
03	30	INCOMING POWER LINE	
02	32	ENCLOSURE SERVICE	
02	34	UPS AND STANDSTILL HEATERS	
02	40	24Vdc SUPPLY	
02	50	HOISTING VFD CONNECTIONS	
02	52	ROTATION AND TROLLEY VFD CONNECTIONS	
02	54	ROTATION AND TROLLEY MOTORS	
02	56	MOTOR BRAKES	
02	60	CPU	
02	62	SAFETY MODULES	
02	64	SAFETY MODULES	
02	66	DIGITAL INPUT	
02	68	DIGITAL INPUT	
02	70	DIGITAL INPUT	
02	72	DIGITAL INPUT	
02	74	DIGITAL OUTPUT	
02	76	DIGITAL OUTPUT	
02	78	ANALOG INPUT AND OUTPUT	
02	80	LOAD CELL	
02	82	HOISTING AND ROTATION ENCODERS	
02	84	TROLLEY ENCODER	
02	86	MOPS COMMAND	
02	90	TERMINAL STRIP X01	
02	92	TERMINAL STRIP XS1	
02	94	TERMINAL STRIP JB / X02	

GENERAL NOTES

1:

2:

3:

4:

REMAZEL ENGINEERING
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e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 2

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

	MANUAL POWER DISCONNECTING SWITCH		FAN		
	FUSE POWER DISCONNECTING SWITCH		STANDSTILL HEATER		
	THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY OPEN THERMOSTAT		
	DIFFERENTIAL THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY CLOSE THERMOSTAT		
	CONTACTOR / RELE' COIL		LAMP		
	POWER CONTACT		EMERGENCY PUSH BUTTON		
	NORMALLY OPEN CONTACT		NORMALLY OPEN PUSH BUTTON		
	NORMALLY CLOSE CONTACT		NORMALLY OPEN KEY SELECTOR		
	SWITCHING POWER SUPPLY		NORMALLY CLOSE LIMIT SWITCH		
	MOTOR		INDUCTIVE LIMIT SWITCH		
	MOTOR THERMAL PROTECTION		HORN		
	ENCODER		LOAD CELL		
	MOTOR BRAKE		PROTECTIVE EARTH		
	SERVICE SOCKET				

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

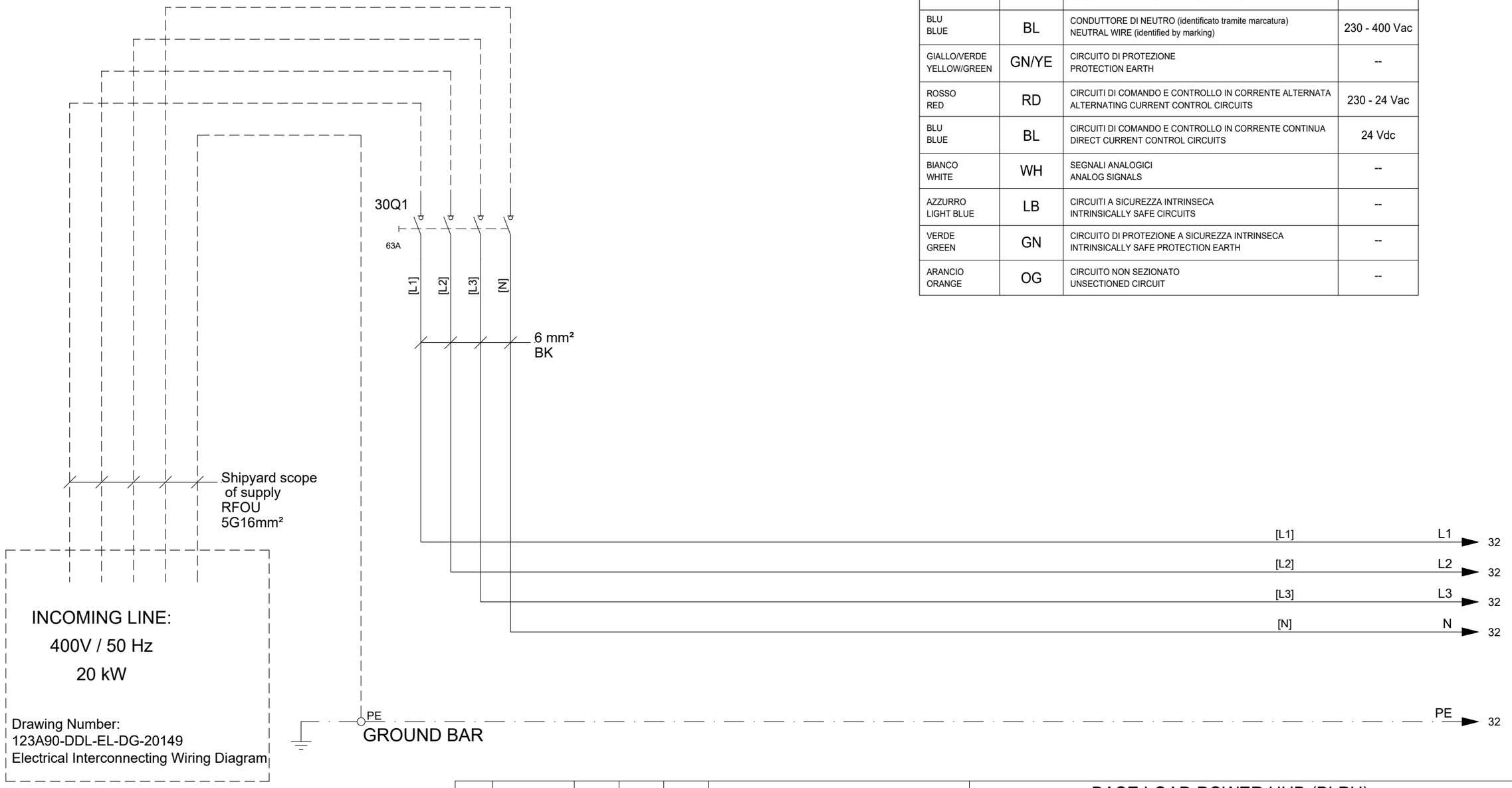
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SYMBOLS LEGEND

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 10 | REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



IDENTIFICAZIONE CONDUTTORI
WIRES IDENTIFICATION (CEI EN 60204-32)

COLORE COLOR	LEGENDA LEGEND	TIPO DI CIRCUITO CIRCUIT TYPE	TENSIONE VOLTAGE
NERO BLACK	BK	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	690 - 400 Vac
ROSSO RED	RD	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	230 Vac
BLU BLUE	BL	CONDUTTORE DI NEUTRO (identificato tramite marcatura) NEUTRAL WIRE (identified by marking)	230 - 400 Vac
GIALLO/VERDE YELLOW/GREEN	GN/YE	CIRCUITO DI PROTEZIONE PROTECTION EARTH	--
ROSSO RED	RD	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE ALTERNATA ALTERNATING CURRENT CONTROL CIRCUITS	230 - 24 Vac
BLU BLUE	BL	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE CONTINUA DIRECT CURRENT CONTROL CIRCUITS	24 Vdc
BIANCO WHITE	WH	SEGNALI ANALOGICI ANALOG SIGNALS	--
AZZURRO LIGHT BLUE	LB	CIRCUITI A SICUREZZA INTRINSECA INTRINSICALLY SAFE CIRCUITS	--
VERDE GREEN	GN	CIRCUITO DI PROTEZIONE A SICUREZZA INTRINSECA INTRINSICALLY SAFE PROTECTION EARTH	--
ARANCIO ORANGE	OG	CIRCUITO NON SEZIONATO UNSECTIONED CIRCUIT	--

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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
INCOMING POWER LINE

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 30

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

30 L1 [L1] [L1] L1 34
30 L2 [L2] [L2] L2 34
30 L3 [L3] [L3] L3 34
30 N [N] [N] N 34
30 PE PE 34

[L1] [L2] [L3] [N] 1,5 mm² BK x 3 + BL

[L1] [N] 1,5 mm² RD + BL + GN/YE

[L2] [N] 1,5 mm² RD + BL + GN/YE

32Q1 1 3 5 2 4 6 2A

32Q2 1 3 C 6A 2 4

32Q3 2A

32E1 Stigo ZR 011 11 12 23 24

1,5 mm² BK

[32-1] [32-1] [32-2] [32-3] [32-4]

[32-5] [32-6]

[32-7] [32-8]

66 32KA1 32HL1 32HL2 32HL3

32X1

32R1 32E2 M 1AC

400Vac VOLTAGE PRESENCE

ELECTRIC SOCKET

HEATER FAN

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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ENCLOSURE SERVICE

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

SCALE : NTS

A3

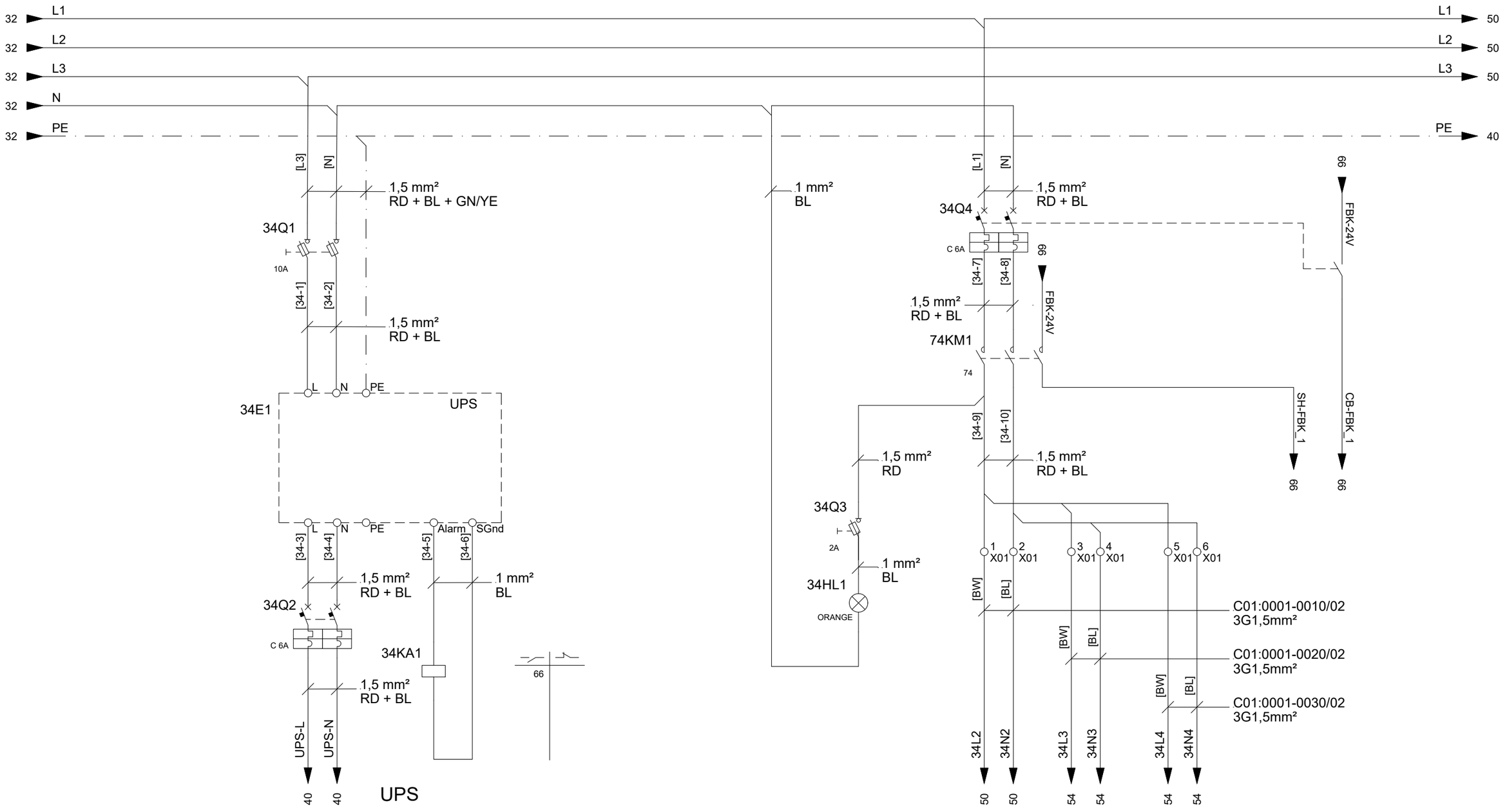
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 32

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



STANDSTILL HEATERS

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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
UPS AND STANDSTILL HEATERS

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

SCALE : NTS

A3

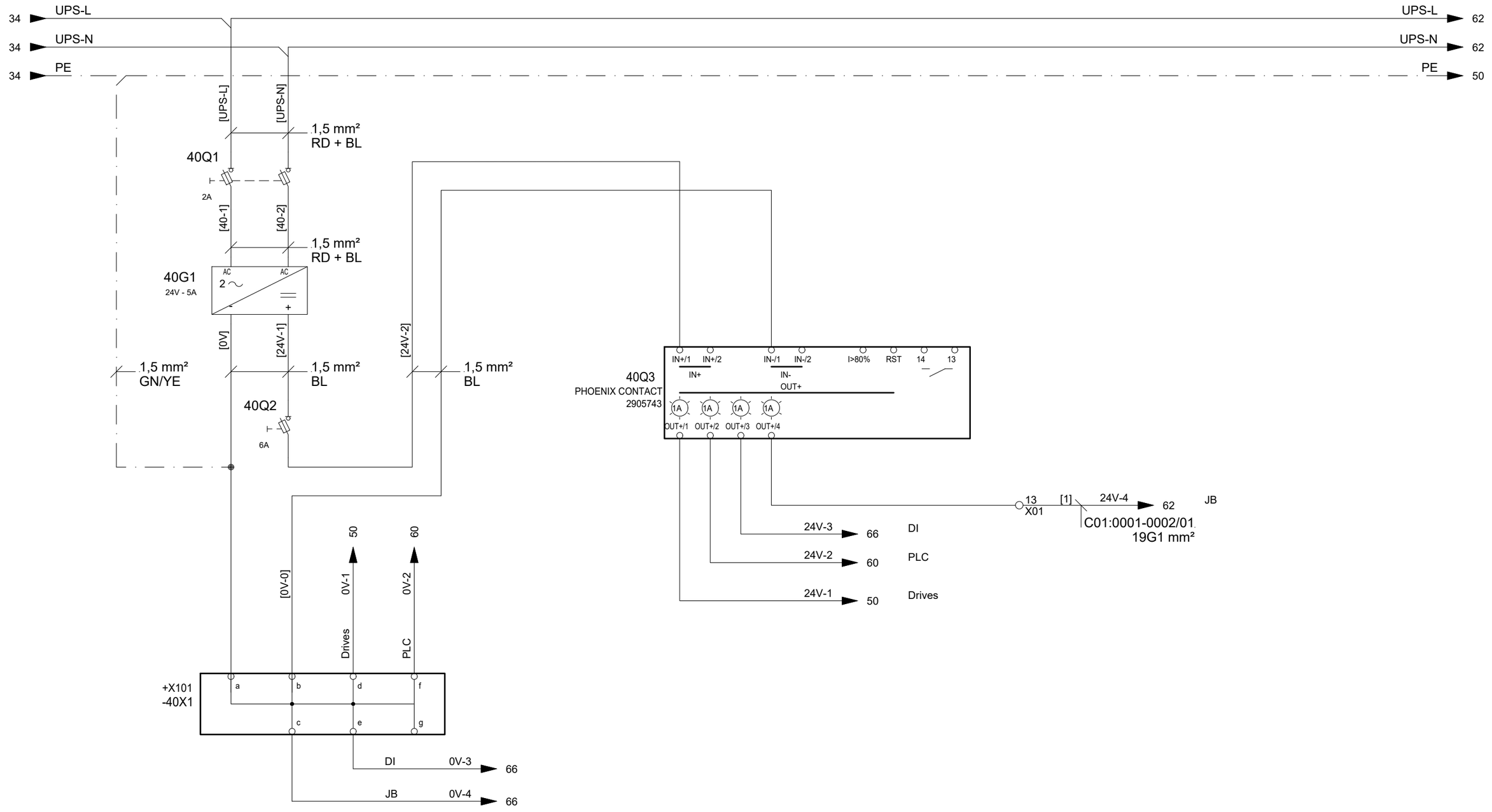
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 34

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
24Vdc SUPPLY

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

SCALE : NTS

A3

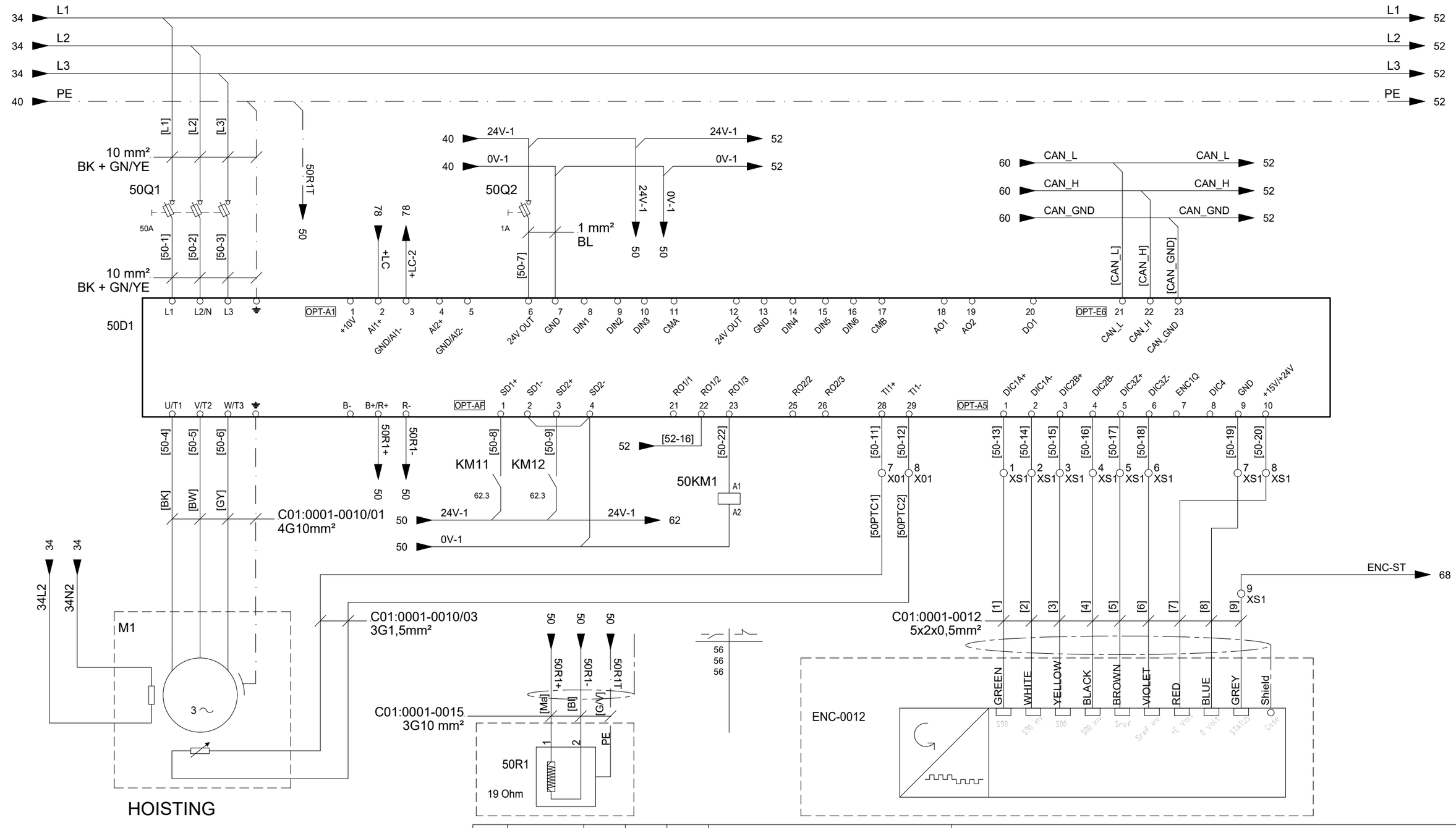
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 40

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING VFD CONNECTIONS

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

SCALE : NTS

A3

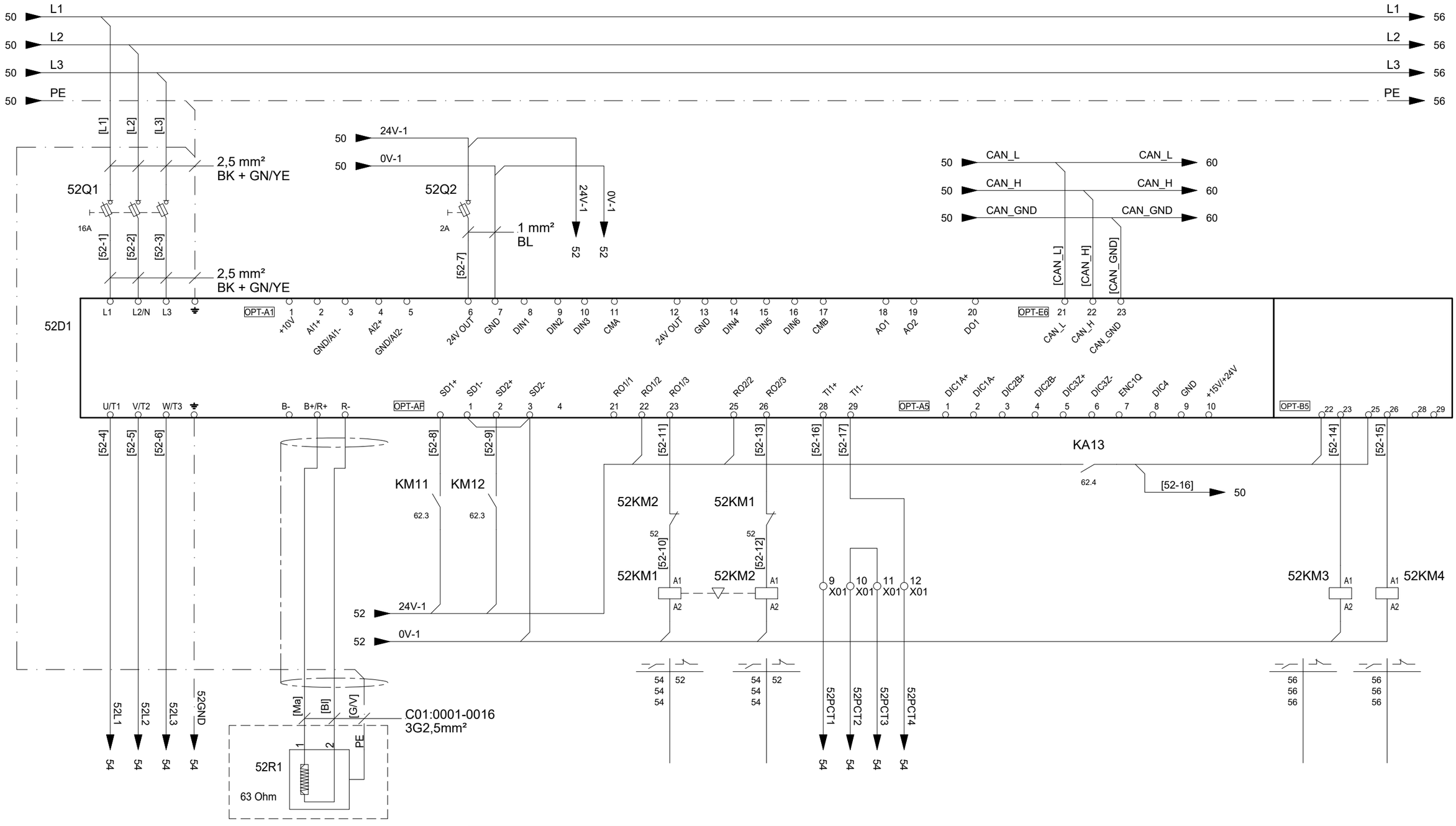
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 50

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY VFD CONNECTIONS

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

SCALE : NTS

A3

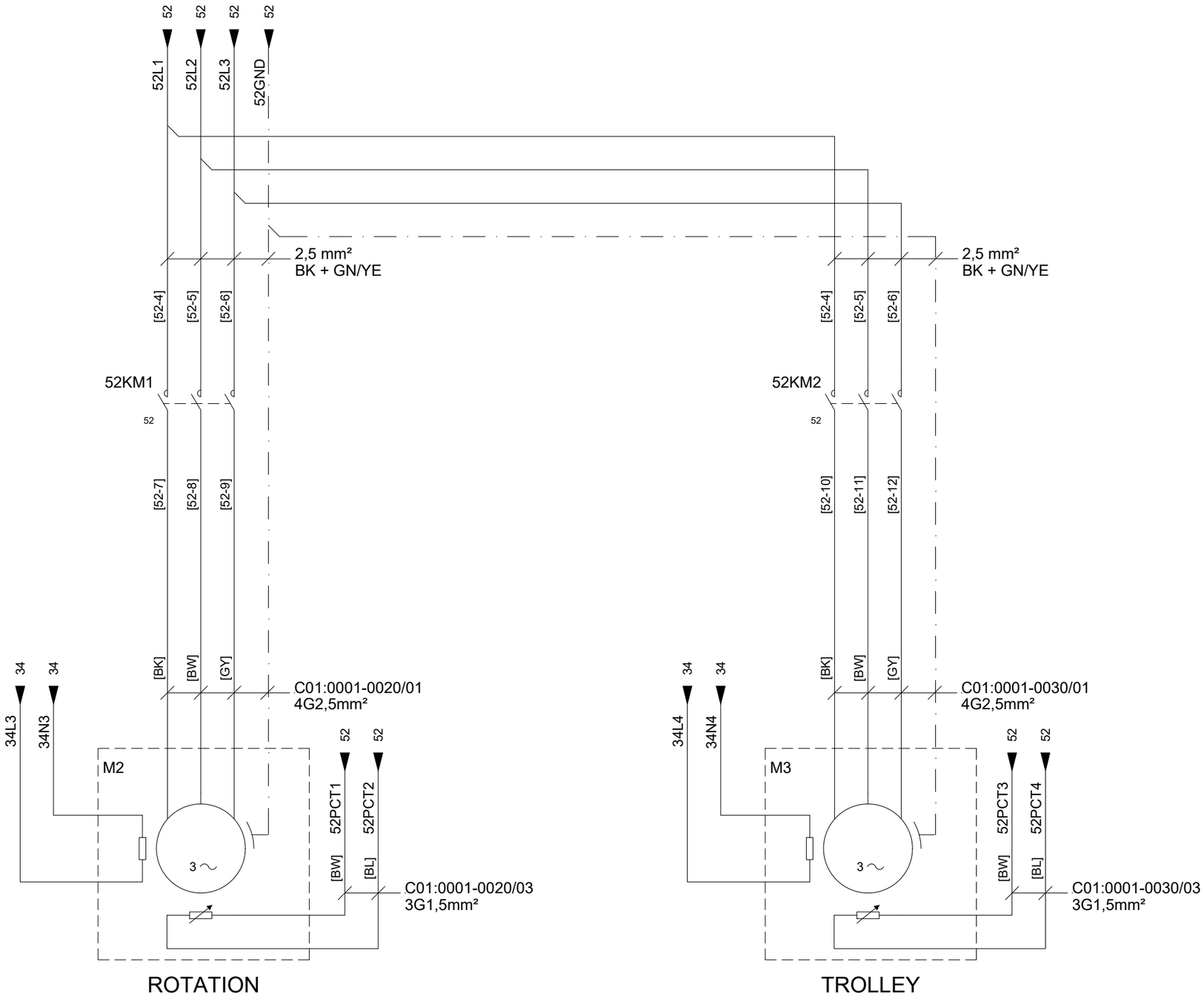
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 52

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY MOTORS

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

SCALE : NTS

A3

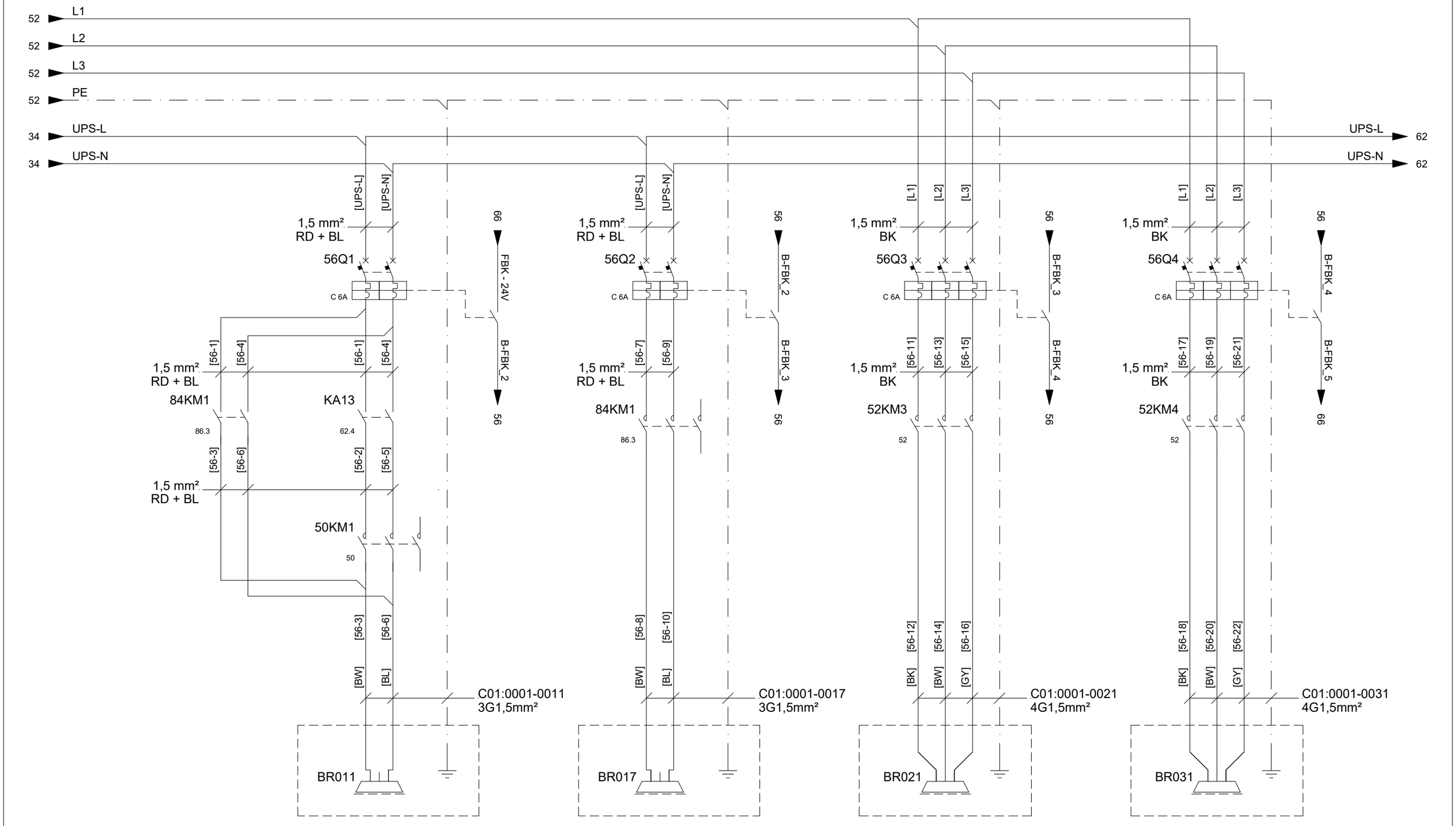
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 54

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOTOR BRAKES

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

SCALE : NTS

A3

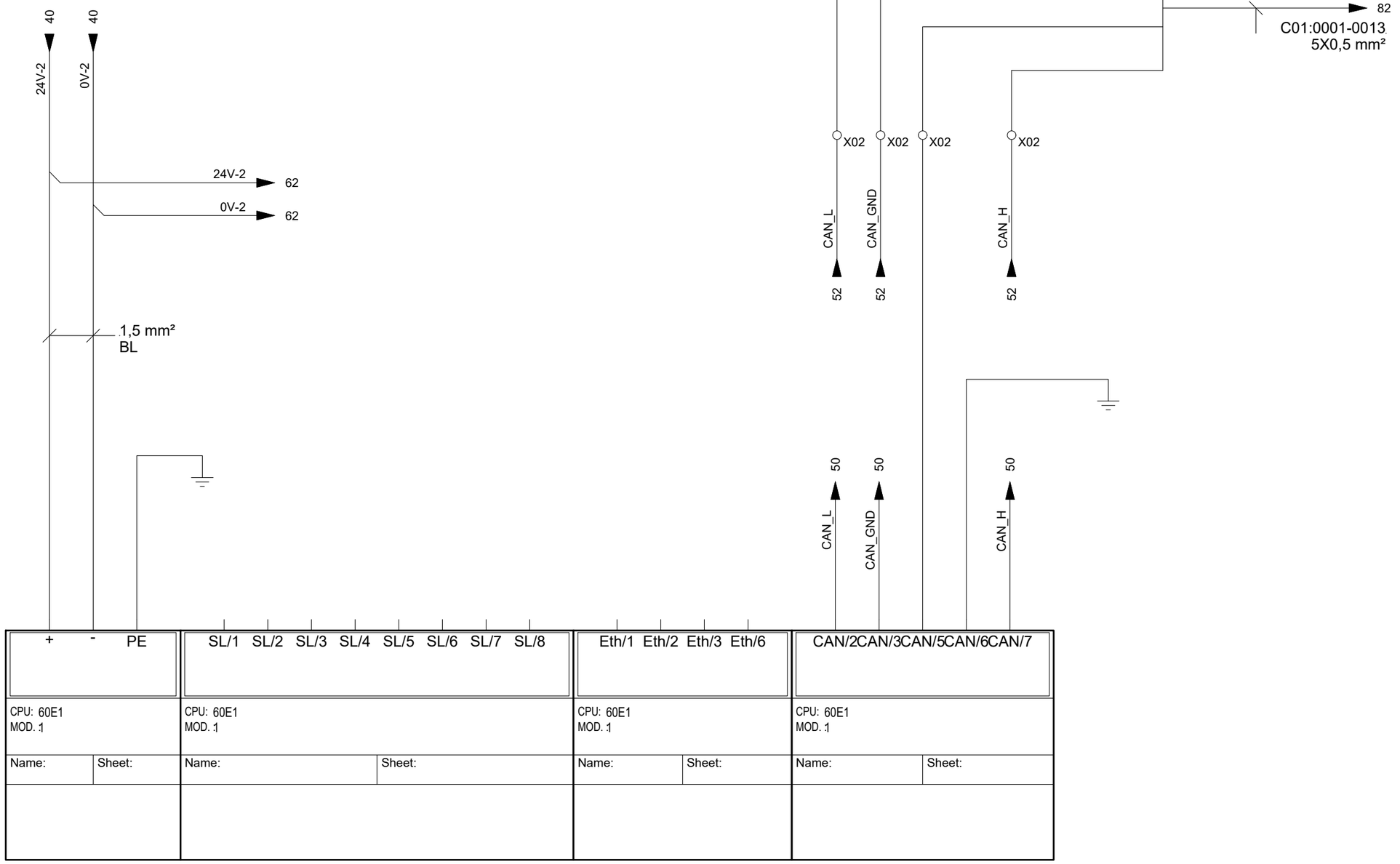
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 56

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



CPU

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
CPU

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

SCALE : NTS

A3

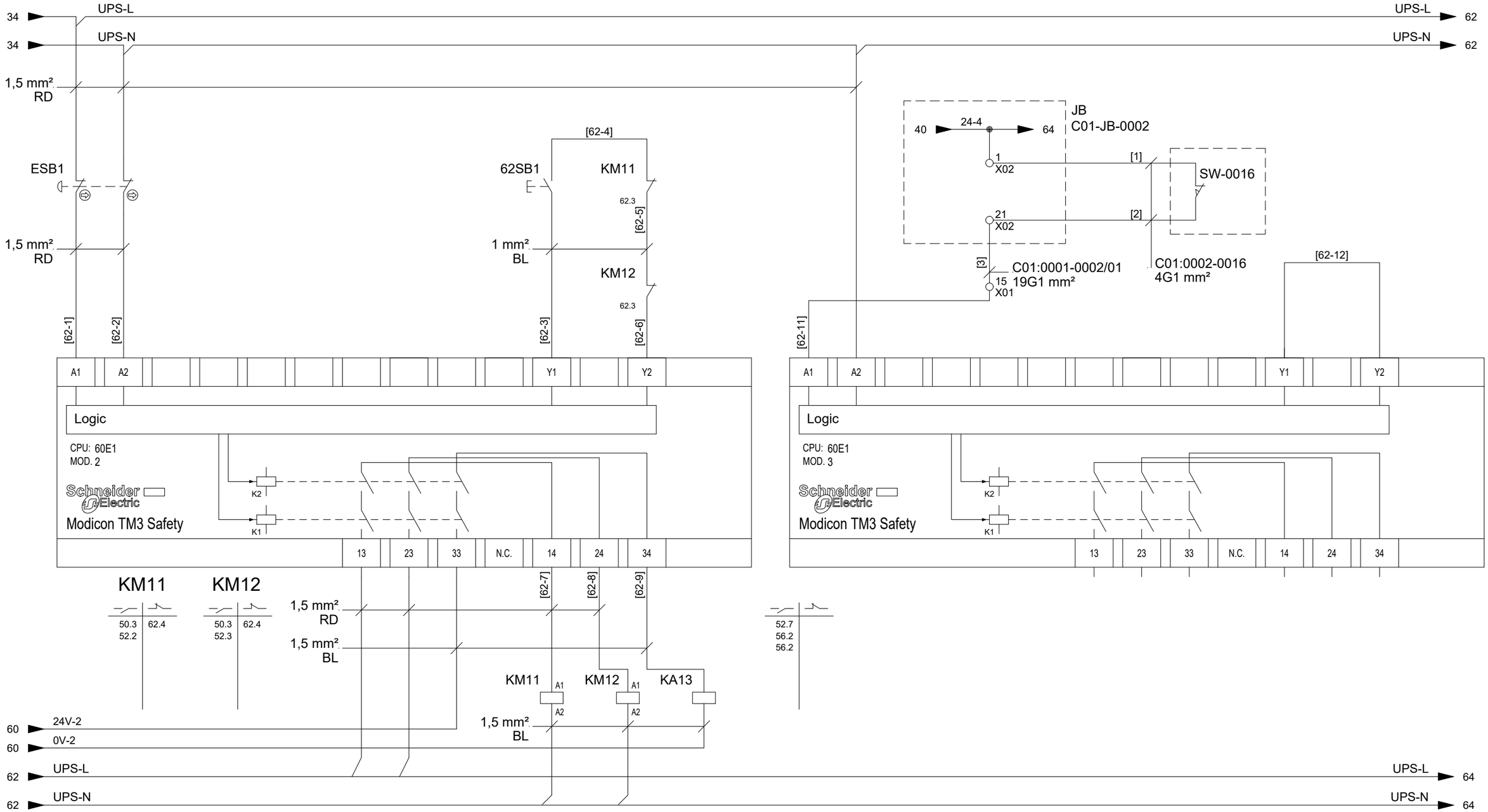
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 60

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



EESD

PAYOUT LIMIT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 62

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

62 UPS-L → UPS-L 64

62 UPS-N → UPS-N 64

JB
C01-JB-0002

62 → 66

2 X02 [1] SW-0036

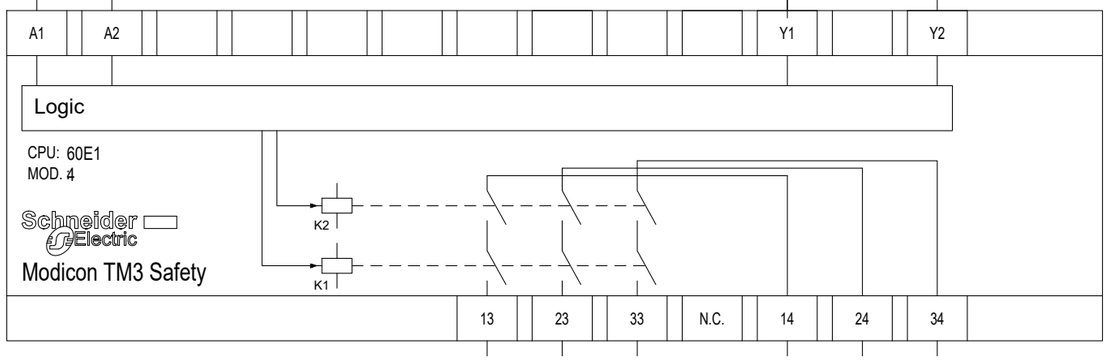
22 X02 [2]

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16 19G1 mm²
X01

C01:0002-0036
4G1 mm²

[64-3]

[64-1]



64 UPS-L → UPS-L 86

64 UPS-N → UPS-N 86

A2B

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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

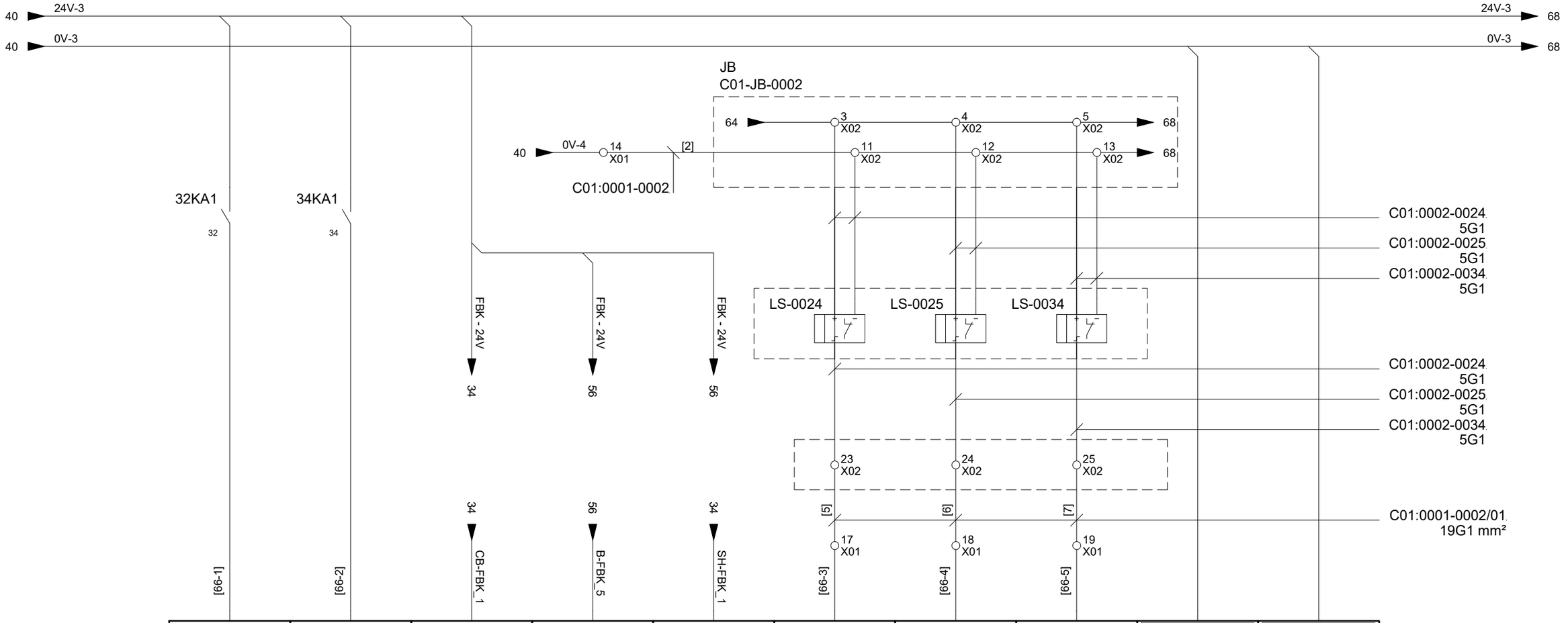
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 64

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



0	1	2	3	4	5	6	7	COM	COM
CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
400Vac OK	UPS STATUS OK	CB FEEDBACK	BRAKE CB FEEDBACK	STANDSTILL HEATERS FEEDBACK	LIMIT SWITCH ROTATION CW	LIMIT SWITCH ROTATION CCW	LIMIT SWITCH TROLLEY TRAVELING FORWARD		

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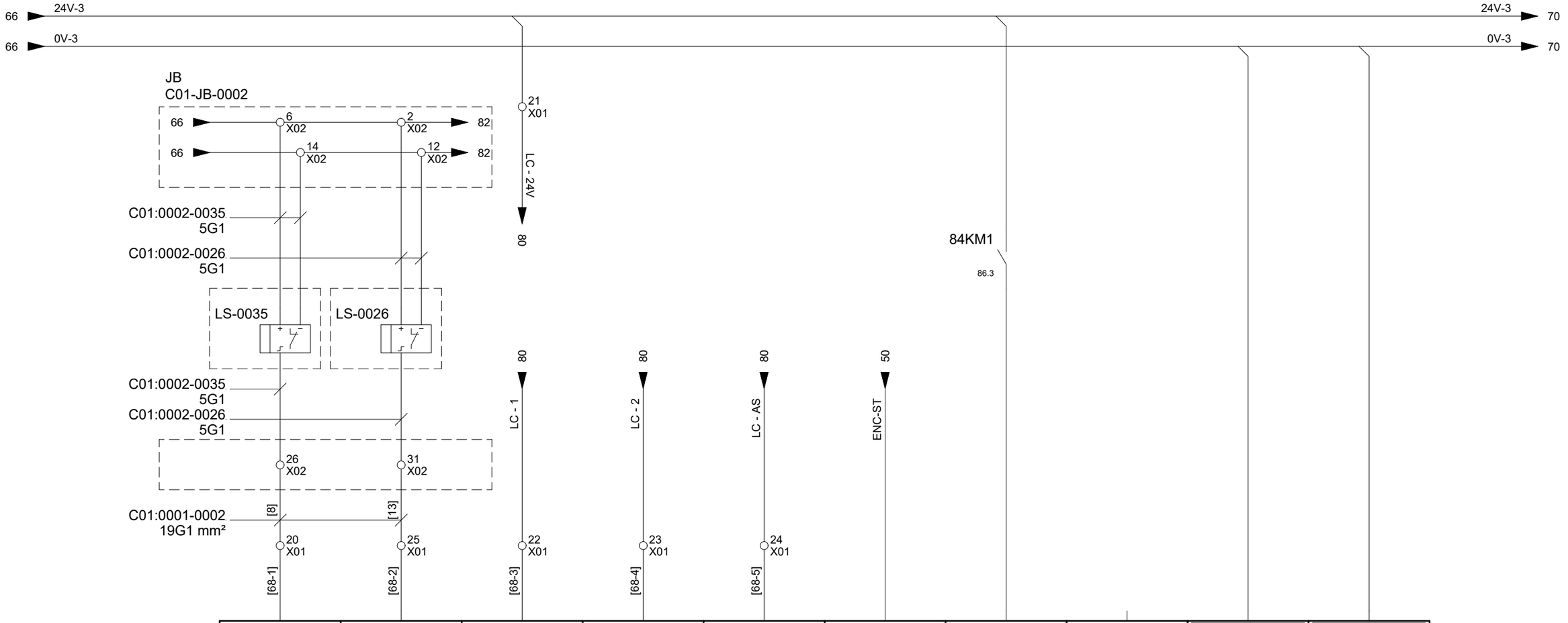
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 66 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
LIMIT SWITCH TROLLEY TRAVELING BACKWARD	LIMIT SWITCH BLOCK PIN	OVERLOAD 1st LIMIT	OVERLOAD 2nd LIMIT	ANTISLACK	HOISTING ENCODER STATUS	MOPS ACTIVE	SPARE		

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ROSETTI MARINO

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02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

SCALE : NTS

A3

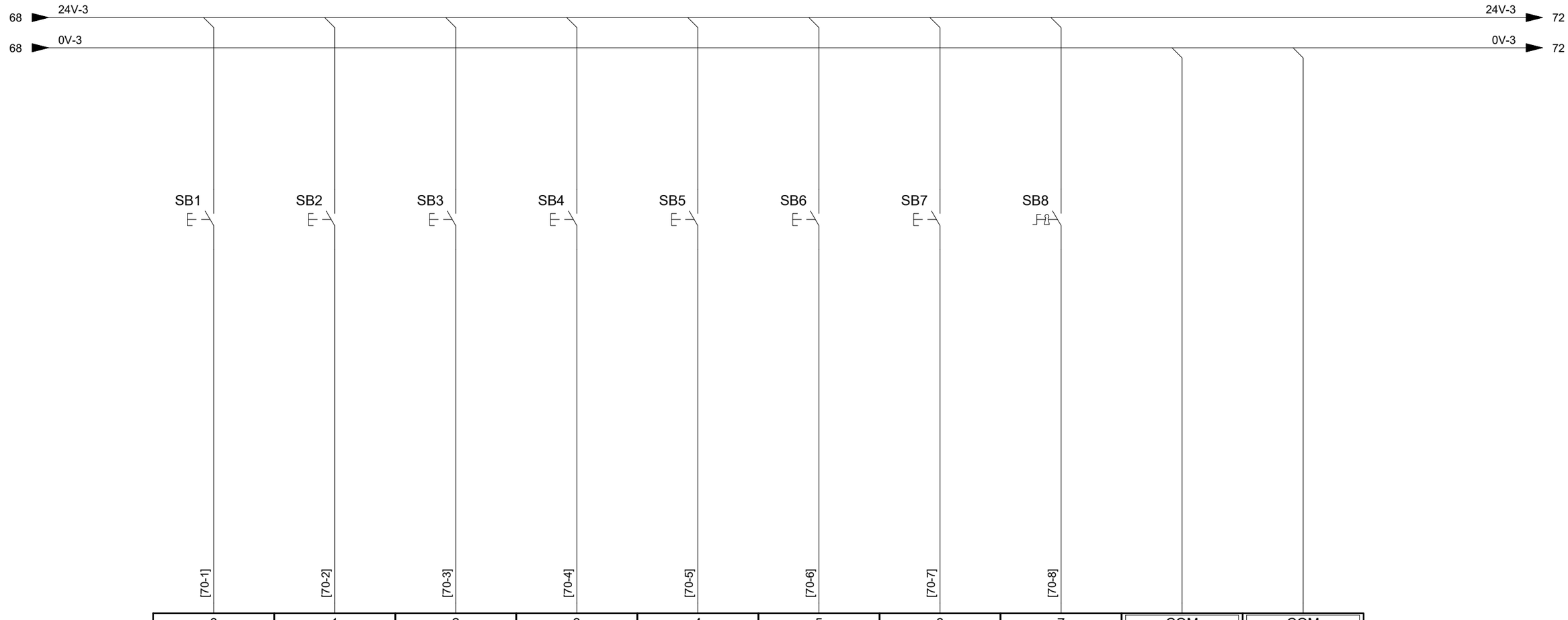
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 68

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



0	1	2	3	4	5	6	7	COM	COM
CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
ROTATION CW PUSH BUTTON	ROTATION CCW PUSH BUTTON	TROLLEY TRAVELING FORWARD PUSH BUTTON	TROLLEY TRAVELING BACKWARD PUSH BUTTON	HOISTING UP PUSH BUTTON	HOISTING DOWN PUSH BUTTON	SECOND SPEED PUSH BUTTON	OVERLOAD BYPASS		

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 70 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

70 24V-3 → 24V-3 74

70 0V-3 → 0V-3 74

8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE		

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

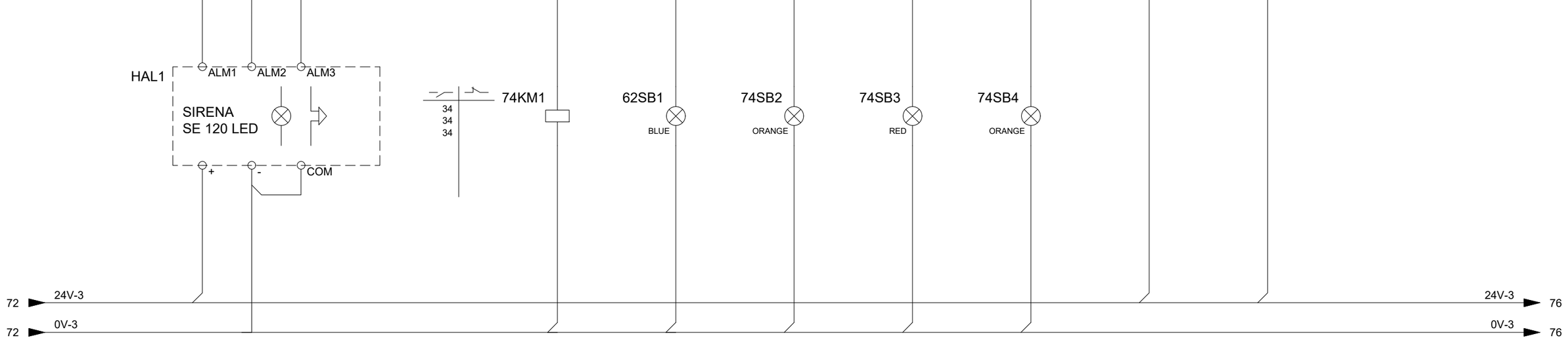
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 72 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

HORN COMAND		HORN STAGE 2		HORN STAGE 3		STANDSTILL HEATERS		RESET REQUEST		PIN ENGAGED		ALARM		OVERLOAD WARNING					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7	
0		1		2		3		4		5		6		7		COM0		COM0	



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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 74

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

AOPS ACTIVATED		MOPS ACTIVATED		3.5 tonn LOAD LIMIT		1 tonn LOAD LIMIT		WARNING		SPARE		SPARE		SPARE					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7			
8		9		10		11		12		13		14		15		COM1		COM1	

76SB1 YELLOW

76SB2 YELLOW

76SB3 YELLOW

76SB4 YELLOW

76SB5 YELLOW

74 24V-3

74 0V-3

24V-3 78

0V-3 78

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

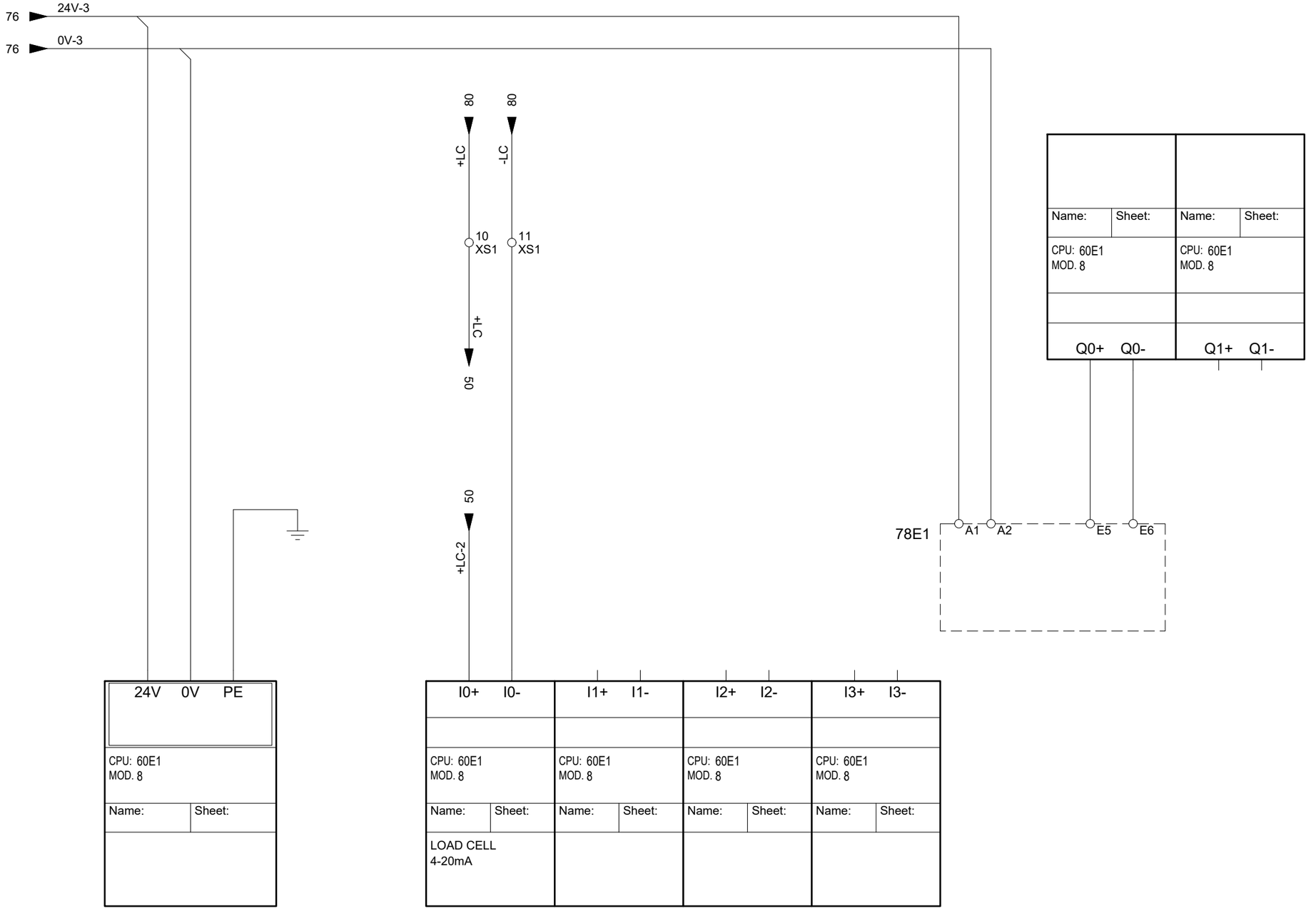
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 76

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ANALOG INPUT AND OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

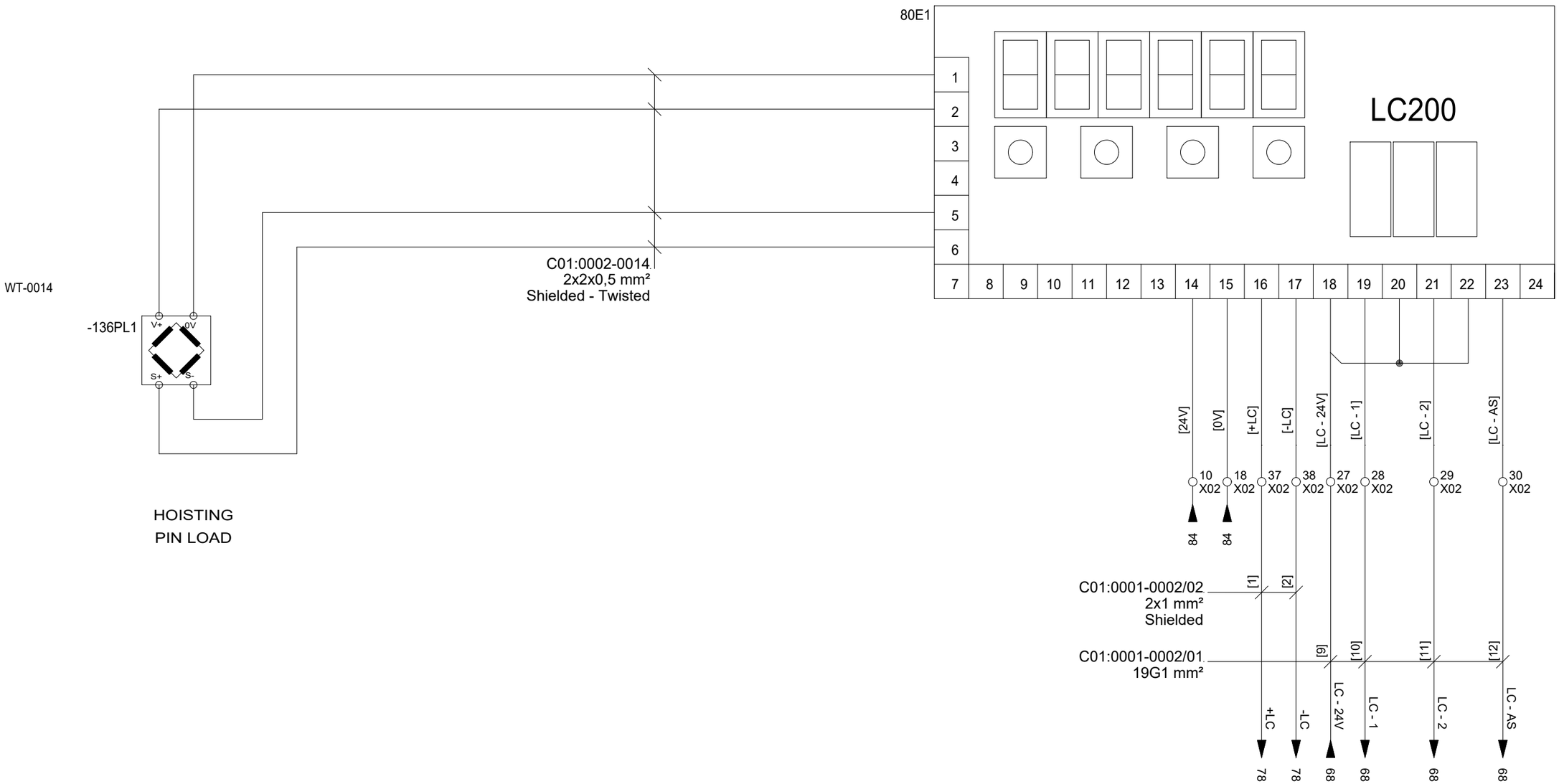
SHEET 78

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

LOAD CELL AMPLIFIER



HOISTING
PIN LOAD

LOAD CELL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
LOAD CELL

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

SCALE : NTS

A3

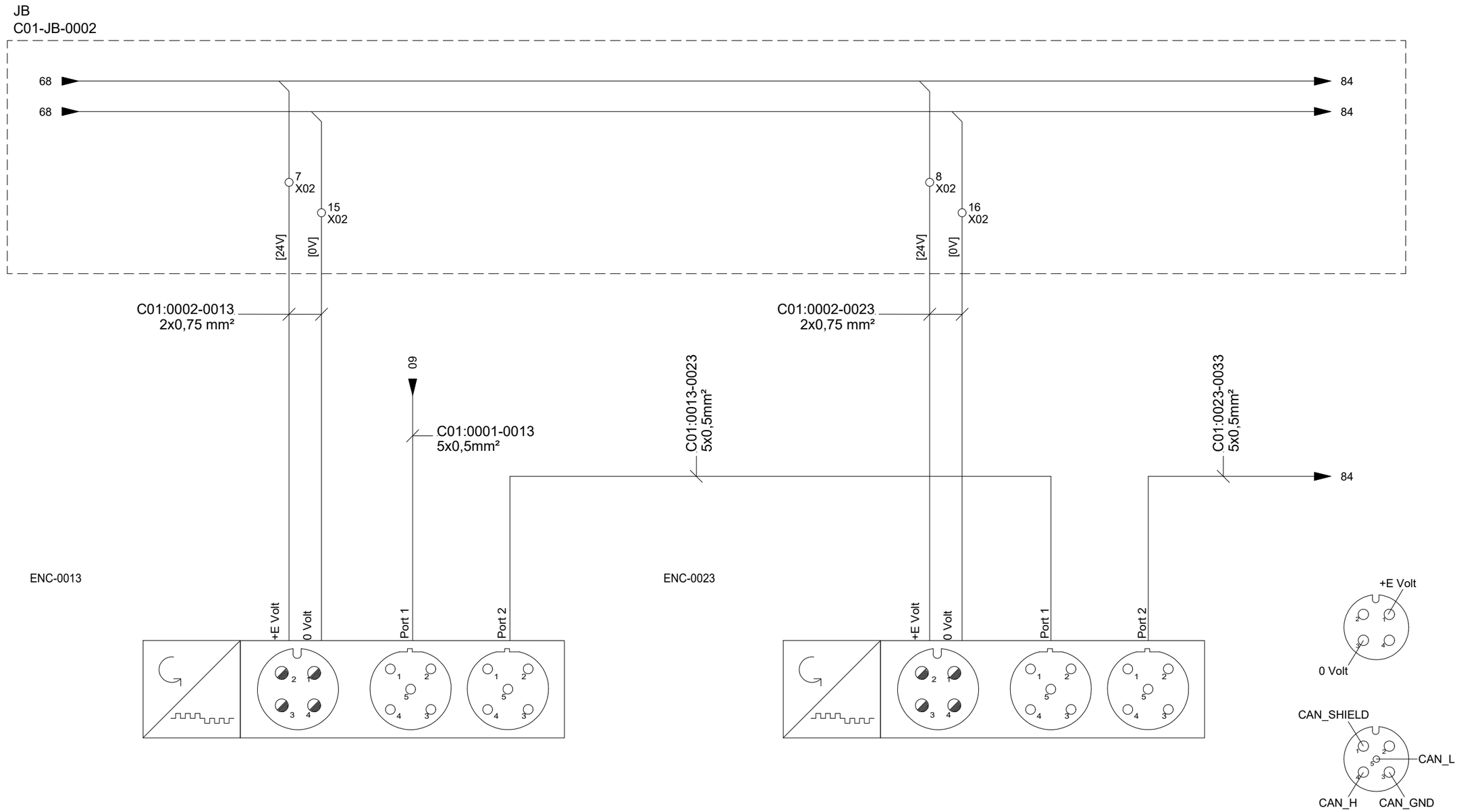
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 80

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING AND ROTATION ENCODERS

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

SCALE : NTS

A3

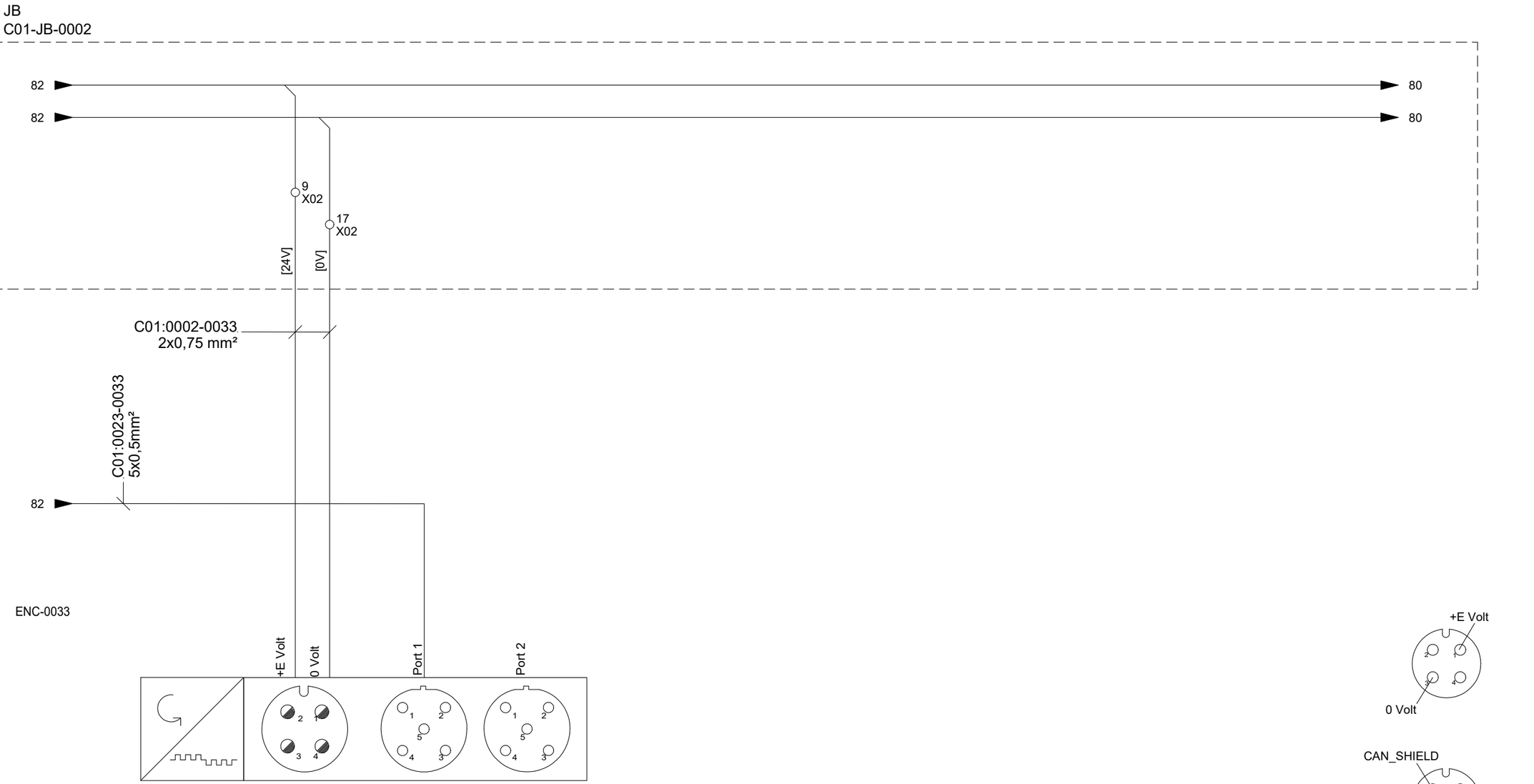
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 82

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

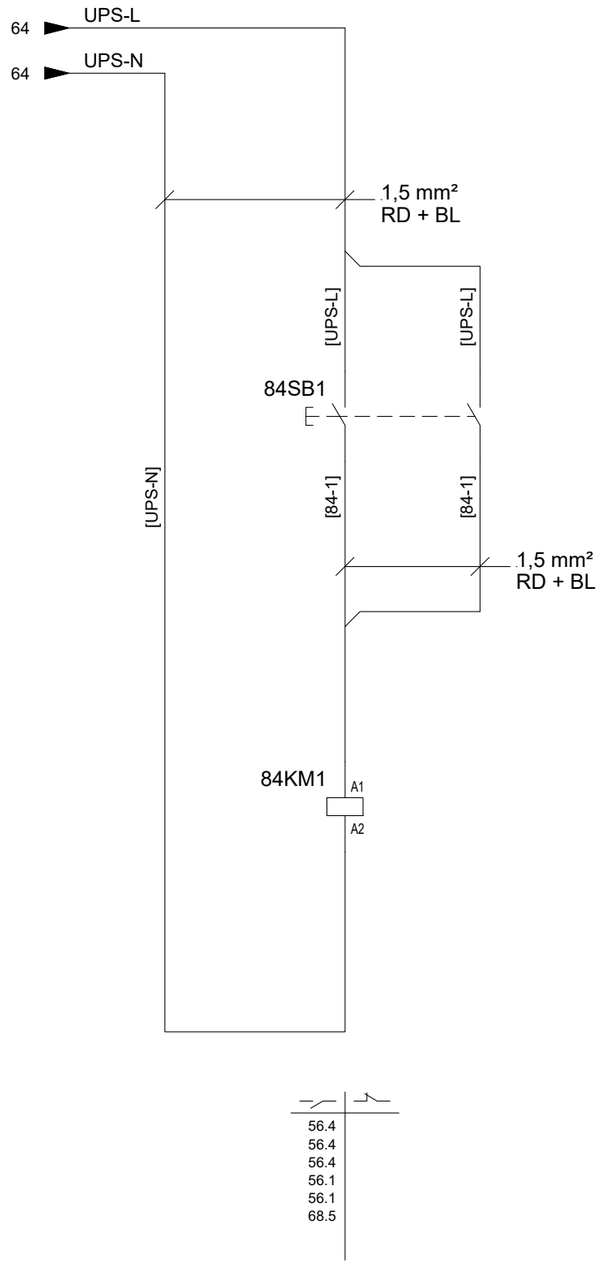
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TROLLEY ENCODER

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 84 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOPS COMMAND

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

SCALE : NTS

A3

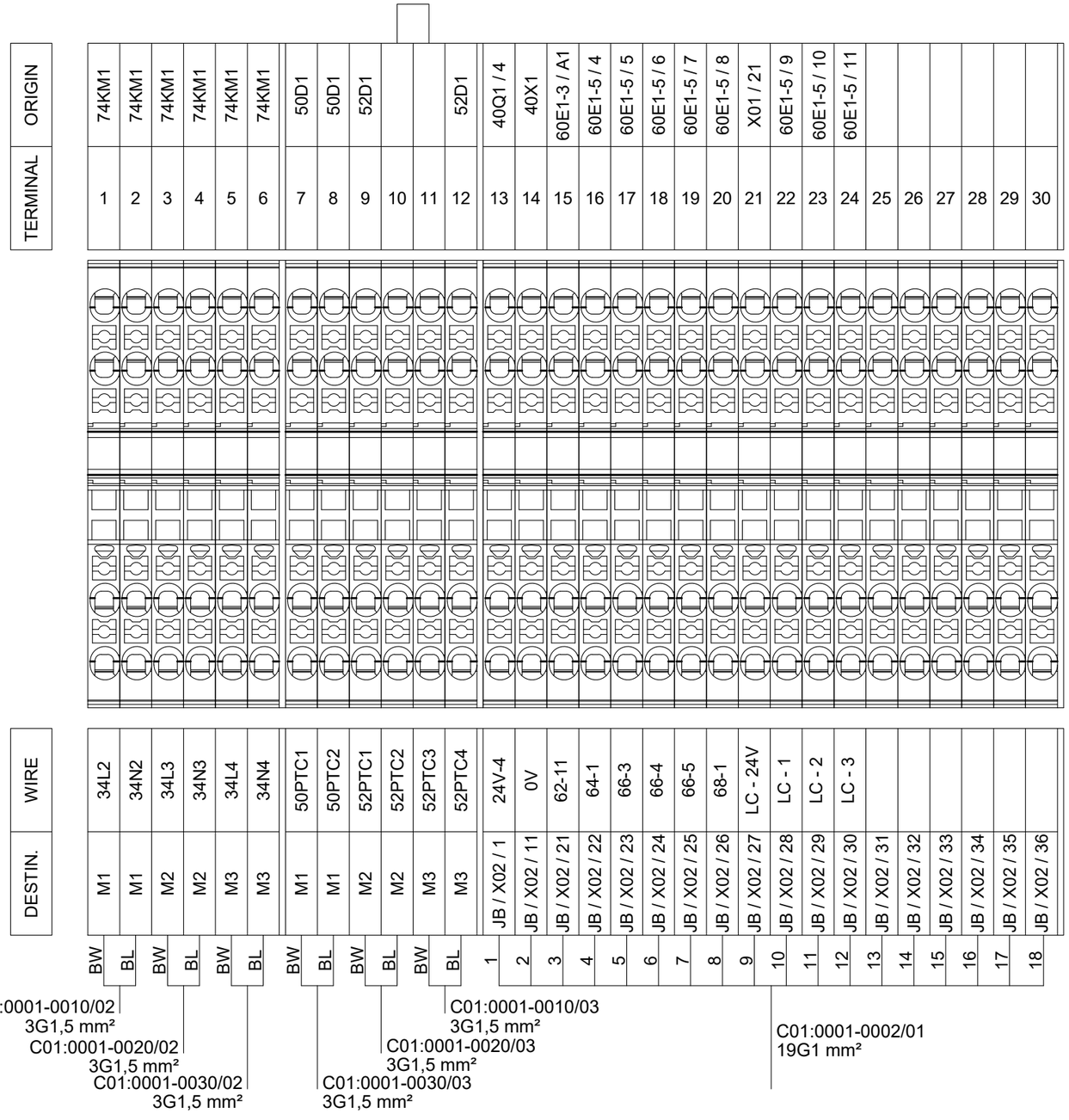
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 86

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP X01

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

SCALE : NTS

A3

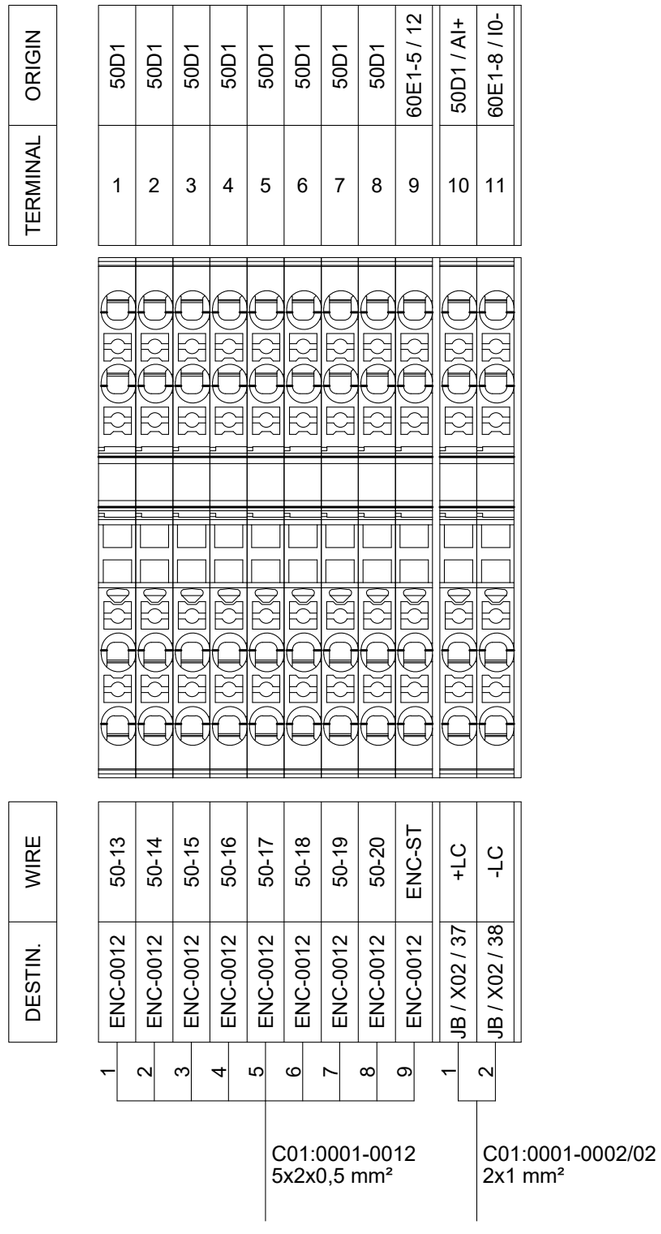
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 90

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP XS1

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 92 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

TERMINAL	ORIGIN
1	SW-0016
2	SW-0036
3	LS-0024
4	LS-0025
5	LS-0034
6	LS-0035
7	ENC-0013
8	ENC-0023
9	ENC-0033
10	80E1 / 14
11	LS-0024
12	LS-0025
13	LS-0034
14	LS-0035
15	ENC-0013
16	ENC-0023
17	ENC-0033
18	80E1 / 15
19	
20	
21	SW-0016
22	SW-0036
23	LS-0024
24	LS-0025
25	LS-0034
26	LS-0035
27	
28	80E1 / 19
29	80E1 / 21
30	80E1 / 23
31	LS-0026
32	
33	
34	
35	
36	
37	80E1 / 16
38	80E1 / 17

WIRE	DESTIN.
24V-4	X01 / 13
24V-4	LS-0026
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
0V	X01 / 14
0V	LS-0026
0V	
0V	
0V	
0V	
0V	
0V	
62-11	X01 / 15
64-1	X01 / 16
66-3	X01 / 17
66-4	X01 / 18
66-5	X01 / 19
68-1	X01 / 20
LC - 24V	X01 / 21
LC - 1	X01 / 22
LC - 2	X01 / 23
LC - 3	X01 / 24
68-2	X01 / 25
	X01 / 26
	X01 / 27
	X01 / 28
	X01 / 29
	X01 / 30
+LC	50D1 / AI+
-LC	60E1-8 / I0-

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 1 2

C01:0001-0002/01
19G1 mm²

C01:0001-0002/02
2X1 mm² shielded

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP JB / X02

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 94

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

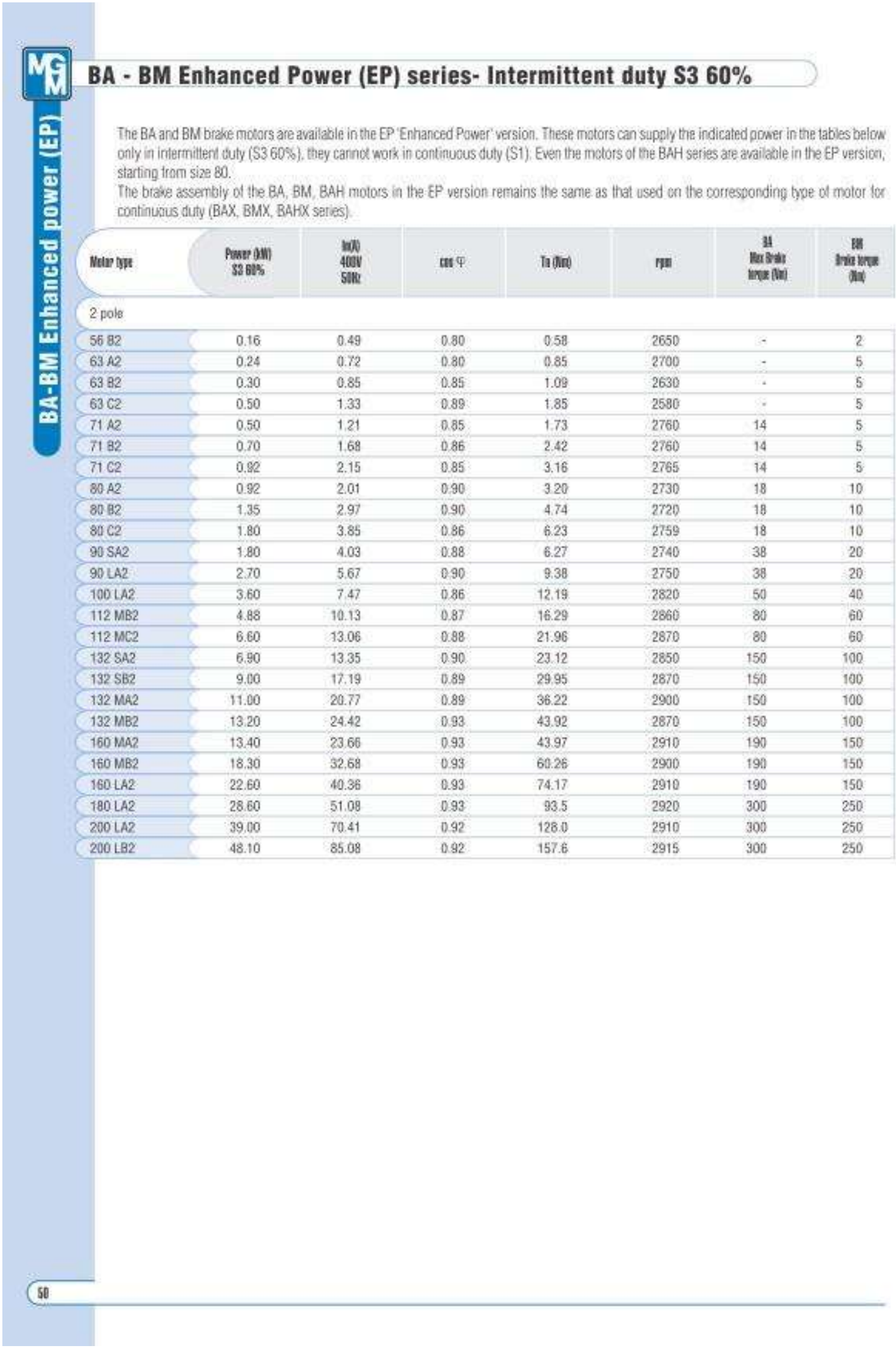
3 MOTOR DATA SHEETS AND LOAD LIST

3.1 ELECTRICAL LOAD LIST

FEEDING LINE	Load	Rated Power [kW]	cos φ	Load Type	Utilization factor (ku)	Utilized power [kW] (kW*ku)
400Vac / 50 Hz / 3 Phases + neutral	Hoisting motor	14,0	0,84	S3 60%	0,8	11,20
	Rotation motor	3,90	0,86	S3 60%	0,5	1,80
	Trolley motor	1,45	0,84	S3 60%	0,5	0,73
	auxiliaries	1,50	0,95		0,7	1,05
	Total	20,85				14,78

Table 2 - Electrical Load List

3.2 MOTORS DATA SHEET



BA-BM Enhanced power (EP)

BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

The BA and BM brake motors are available in the EP 'Enhanced Power' version. These motors can supply the indicated power in the tables below only in intermittent duty (S3 60%), they cannot work in continuous duty (S1). Even the motors of the BAH series are available in the EP version, starting from size 80.
The brake assembly of the BA, BM, BAH motors in the EP version remains the same as that used on the corresponding type of motor for continuous duty (BAX, BMX, BAHX series).

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Ta (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
2 pole							
56 B2	0.16	0.49	0.80	0.58	2650	-	2
63 A2	0.24	0.72	0.80	0.85	2700	-	5
63 B2	0.30	0.85	0.85	1.09	2630	-	5
63 C2	0.50	1.33	0.89	1.85	2580	-	5
71 A2	0.50	1.21	0.85	1.73	2760	14	5
71 B2	0.70	1.68	0.86	2.42	2760	14	5
71 C2	0.92	2.15	0.85	3.16	2765	14	5
80 A2	0.92	2.01	0.90	3.20	2730	18	10
80 B2	1.35	2.97	0.90	4.74	2720	18	10
80 C2	1.80	3.85	0.86	6.23	2759	18	10
90 SA2	1.80	4.03	0.88	6.27	2740	38	20
90 LA2	2.70	5.67	0.90	9.38	2750	38	20
100 LA2	3.60	7.47	0.86	12.19	2820	50	40
112 MB2	4.88	10.13	0.87	16.29	2860	80	60
112 MC2	6.60	13.06	0.88	21.96	2870	80	60
132 SA2	6.90	13.35	0.90	23.12	2850	150	100
132 SB2	9.00	17.19	0.89	29.95	2870	150	100
132 MA2	11.00	20.77	0.89	36.22	2900	150	100
132 MB2	13.20	24.42	0.93	43.92	2870	150	100
160 MA2	13.40	23.66	0.93	43.97	2910	190	150
160 MB2	18.30	32.68	0.93	60.26	2900	190	150
160 LA2	22.60	40.36	0.93	74.17	2910	190	150
180 LA2	28.60	51.08	0.93	93.5	2920	300	250
200 LA2	39.00	70.41	0.92	128.0	2910	300	250
200 LB2	48.10	85.08	0.92	157.6	2915	300	250

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Tn (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
4 pole							
63 A4	0.15	0.60	0.80	1.30	1100	-	5
63 B4	0.23	0.78	0.73	1.65	1300	-	5
63 C4	0.26	0.81	0.89	1.92	1310	-	5
63 D4	0.37	1.24	0.85	2.96	1180	-	5
71 A4	0.33	0.94	0.81	2.33	1330	14	5
71 B4	0.5	1.37	0.79	3.48	1320	14	5
71 C4	0.7	1.97	0.82	5.29	1290	14	5
71 D4	0.8	2.22	0.80	5.86	1325	14	5
80 A4	0.7	1.96	0.80	5.13	1330	18	10
80 B4	0.98	2.55	0.79	6.97	1335	18	10
80 C4	1.20	3.04	0.78	8.37	1365	18	10
80 D4	1.30	3.50	0.73	9.09	1365	18	10
90 SA4	1.45	3.33	0.84	10.22	1355	38	20
90 LA4	1.95	4.43	0.86	13.90	1340	38	20
90 LB4	2.30	5.27	0.83	16.15	1360	38	20
90 LC4	2.70	6.34	0.82	19.10	1350	38	20
100 LA4	2.90	6.29	0.86	20.21	1370	50	40
100 LB4	3.90	8.30	0.86	26.99	1380	50	40
112 MB4	4.80	9.96	0.86	32.86	1395	80	60
112 MC4	6.60	13.68	0.85	45.02	1400	80	60
132 SB4	7.10	14.54	0.85	48.09	1410	150	100
132 MA4	9.80	19.60	0.86	66.61	1405	150	100
132 MB4	12.0	23.73	0.87	81.27	1410	150	100
132 MC4	14.0	28.34	0.84	94.15	1420	150	100
160 MA4	12.0	24.29	0.84	79.30	1445	190	150
160 MB4	14.0	27.68	0.85	93.2	1435	190	150
160 LA4	19.5	38.11	0.85	129.8	1435	190	150
180 LA4	24.0	46.89	0.86	158.6	1445	300	250
180 LB4	28.6	55.89	0.85	189.0	1445	300	250
200 LB4	39.0	74.47	0.86	259.5	1435	300	250
225 S4	48.1	88.82	0.86	313.5	1465	600	400
225 M4	58.5	108.0	0.87	381.3	1465	600	400
250 M4	70.4	122.9	0.89	455.8	1475	700	-
280 S4	97.5	176.2	0.86	628.3	1482	1000	-
280 M4	117.0	216.0	0.86	754.9	1480	1000	-

1. Motor characteristic values reported in the tables refer to intermittent duty (S3 60%), voltage 3~400V 50 Hz, ambient temperature max. 40 °C, altitude up to 1000 m. above sea level operating condition. These motors are not included in the scope of the regulation (EU) 2019/1781 a then and they are exempt from efficiency requirements of the regulation.
2. MGM keeps the data provided as up-to-date and correct as possible. Since the products are subject to changes and improvements the data indicated can not be considered binding. The data indicated must also be understood as being general in nature. For specific applications, please contact the MGM staff.
3. For BA Enhanced Power (EP) motors the maximum brake torque values indicated on the chart refer to AC brake; DC brake on BA series is available on request only.
4. The maximum brake torque for BAK 132 motors series is 120 Nm.

BA-BM Enhanced power (EP)

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Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 99-00 & process: MC & discipline : I

Instrumental	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
X-99001	Lifting Davit	ONSHORE	C10002361	CZX01I	100	2025-04-03	RFC 1

ITEM	Tag	X-99001	: Lifting Davit			Dwg	123A90-DDL-EL-DL-20100
	S/Sys	99-00	: Crane			Module	UD
TASK	code	C10002361		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CZX01I		Package - I

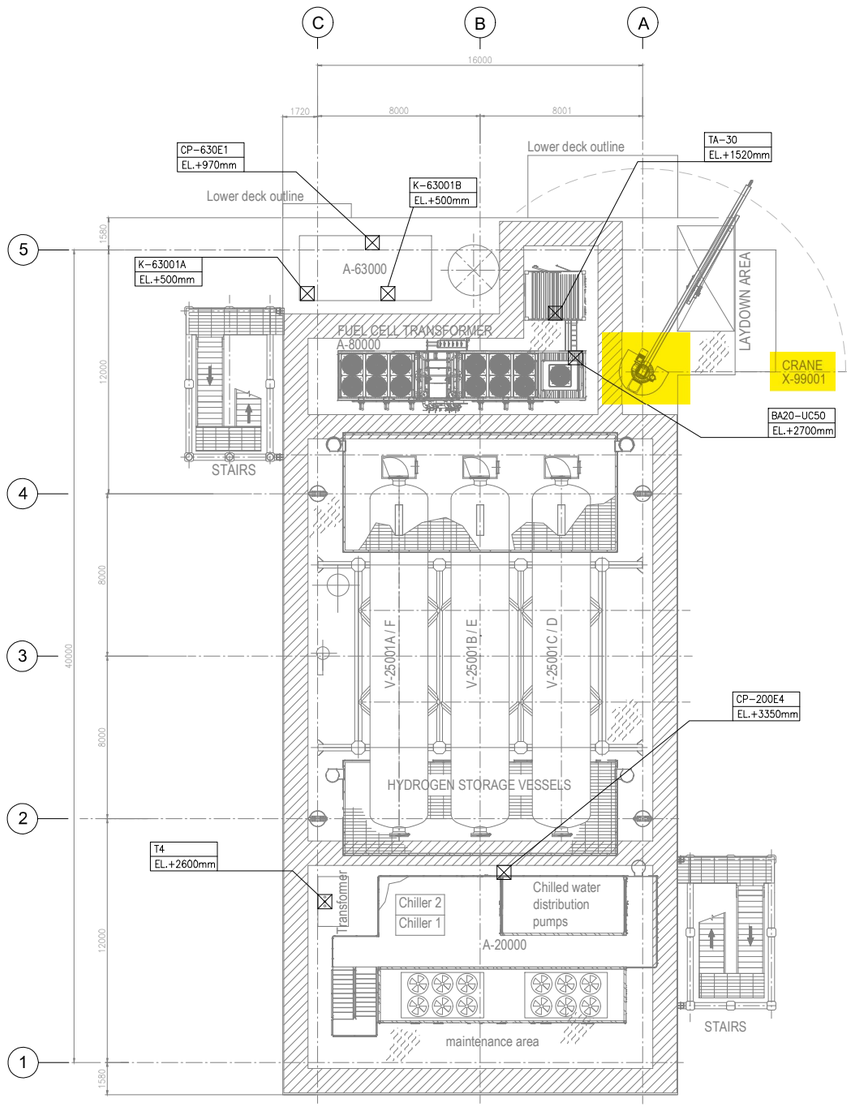
1	Check that electrical component is not damaged.	OK
2	Check that the cables are adequately supported and protected.	OK
3	Check that the equipment, including cables and glands, have been correctly installed (only visual inspection).	OK
4	Check that all equipment has been earthed and bonded.	OK
5	Check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

Comments:

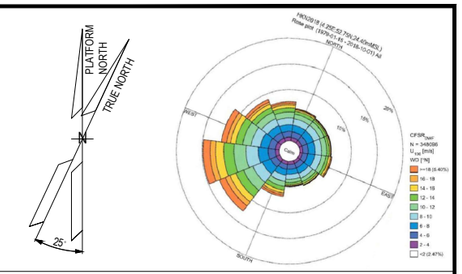
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-04-02	2025-04-03	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-04-02T12:19:50.384Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-04-03T14:14:17.698Z	

DRAWING NO. 123A90-DDL-EL-DL-20100

REV. 01



PLAN ON TOP DECK
EL+30.310 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. UNLESS NOTED OTHERWISE.
4. AFTER INTERFACE PANEL/BATTERY LIMIT CABLES WILL BE ROUTED INSIDE VENDOR CABLETRAYS

LEGEND

⊠	INTERFACE PANEL/BATTERY LIMIT
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-20140	ELECTRICAL HEAT TRACING JUNCTION BOX LAYOUT
123A90-DDL-EL-DL-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	22/07/24	SPS	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)
ELECTRICAL EQUIPMENT LAYOUT
TOP 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 22/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20100	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20100**

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

ROSETTI MARINO SpA

File Name : 123A90-DDL-EL-DL-20100-Electrical Equipment Layout – Top Deck

DRAWING NO. 123A90-DDL-EL-DL-20132

REV. 01

RLMU LIST

REV. 01_B: Sheet 1, 3

PL=01



PL=01 E.B. non installato.
é stato eseguito sparo.
modifica da E13 ad E11E+E11A

PL=01 E.B. not installed.was installed the HILTI (S-BT-ER-M10-HC-120). change from E13 to E11E+E11A

E.B. non instalato (Eseguito sparo)
---
not installed.was installed the HILTI (S-BT-ER-M10-HC-120). change from E13 to E11E+E11A

35mmq

PL=08 IL collegamento è diverso da quanto indicato dal documento.
modifica da E13 ad E11E+E11C

PL=08 E.B. not installed.as the typical. change from E13 to E11E+E11C

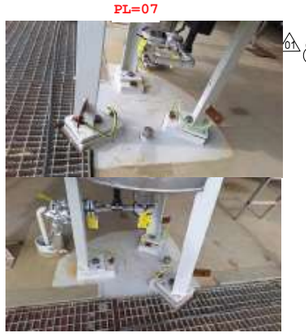
PL=08



PL=07 i collegameti sono diversi da quanto evidenzia il documento in campo connessione su' 3 punti.
le connessioni uttilizzate sono E11C+E11E

PL=07 Connected three wires on same point.See typical E11C+ E11E.

PL=07



E.B. non installato

Not installed

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

PL=02 E.B. non installato.
Scala saldata su struttura.

PL=02 ,E.B Not installed. Ladder welded on structure.

PL=02



PL=09 intallazionè diversa da tipico.
reale installato(E11A+E11E).

PL=09 not installed.as the typical. change from E13 to E11A+E11E

PL=09

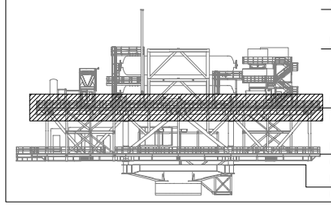


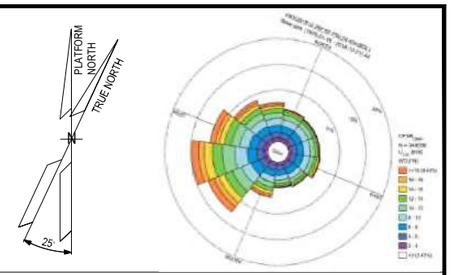
VALID FOR CONSTRUCTION

REV.:	DATE:	SIGNATURE:
1_B	08/11/24	V.Ramponi

ROSETTI MARINO SpA

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. LADDER MUST BE EARTHED IF NOT WELDED TO THE STRUCTURE. LADDER MUST BE EARTHED TO THE UPPER BEAM OF THE STRUCTURE, COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS AS PER TYPICAL E17D.
9. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D.
10. ALL POLE MOUNTED EQUIPMENTS WILL BE EARTHED AS PER TYPICAL E05.
11. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE
12. EARTHED VESSELS V-25001D/E/F. FOR EARTHING V-25001A/B/C SEE SHEET 2 01

LEGEND

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

TYP. / ELE / SIZE	TYPICAL / ELEVATION
E20 / ELE / HEIGHT	AIR TERMINATION ROD NO. / ELEVATION

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP 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-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/05/24	NLK	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

SHEET 001 OF 002

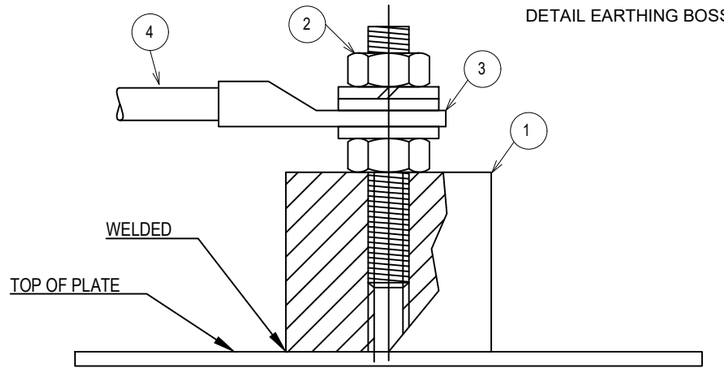
CONTRACT NO./TITLE			SCALE
CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			1:150
DRAWN NLK	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 31/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20132	SHEET 001	REV. 01

File Name : 123A90-DDL-EL-DL-20132

POS.	DESCRIPTION	MATERIAL	SIZE	Q.TY	NOTE
1	EARTHING BOSS WITH THREADED HOLE M10	AISI 316L	50X50 50X150	1	NOTE 2
2	STUD BOLT WITH PLANE WASHER, GROWER AND NUT	AISI 316L	M10X50		
3	COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR	TINNED COPPER			~~NOTE 3~~
4	Y/G INSULATING COPPER CONDUCTOR				NOTE 1 NOTE 5
5	EARTHING PLATE	AISI 316L (NOT PAINTED)	50X50X5		NOTE 4
6	HEXAGONAL BOLT WITH PLANE WASHERS, GROWER AND NUT.	AISI 316L	M10X30		
7	THREADED STUD COMPLETE WITH GROWER AND NUTS	AISI 316L	M10X28		NOTE 6 NOTE 7

E11A

DETAIL EARTHING BOSS 50x50

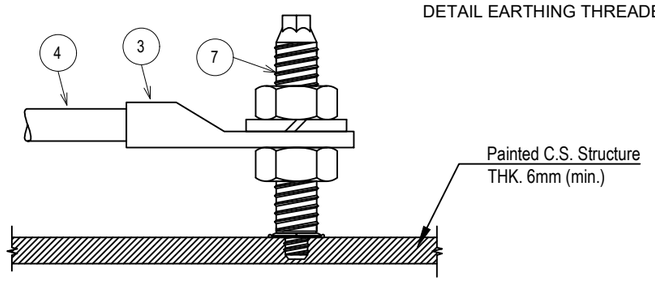


E11D

SEE NOTE 6

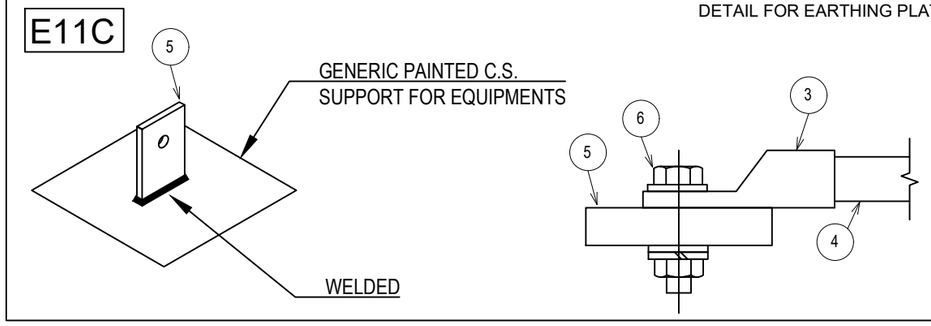
FOR CABLE
MAX 10mm²

DETAIL EARTHING THREADED STUD



E11C

DETAIL FOR EARTHING PLATE

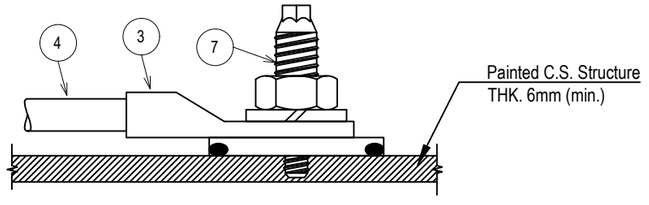


E11E

SEE NOTE 7

FOR CABLE
MAX 35mm²

DETAIL EARTHING THREADED STUD



NOTES:

1) ONLY ONE PROTECTIVE CONDUCTOR TERMINATION LUG SHALL BE CONNECTED TO A DEDICATED EARTHING BOSS, EARTH PLATE OR EARTH STUD.
2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE).
3) ~~CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~
4) EARTHING PLATE SHALL BE DEDICATED TO CABLE TRAY AND PIPE SUPPORTS, JUNCTION BOX, LOCAL CONTROL STATION AND SMALL EQUIPMENT SUPPORTS, LIGHTING POLES, RECEPTACLE SUPPORTS AND REMOVABLE HANDRAILS, ONLY.
5) FOR SIZE OF THE EARTHING CABLE SEE EARTHING LAYOUT DRAWINGS OF RESPECTIVE AREAS
6) HILTI S-BT-ER M10/15 SN6 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 10mm².
7) HILTI S-BT-ER M10 HC 120 CERTIFIED FOR EARTHING SYSTEM. RECOMMENDED MAX CONDUCTOR SIZE 35mm².

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
SINGLE EARTHING CONNECTION

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

SCALE : NTS

A3

DRAWING NO. 123A90–DDL–EL–DD–20090

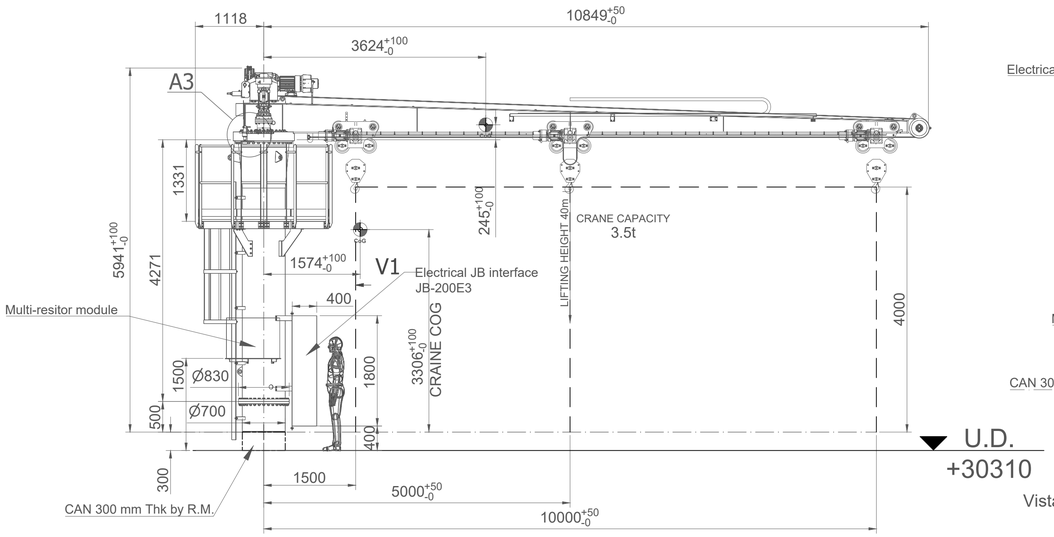
SHEET 003

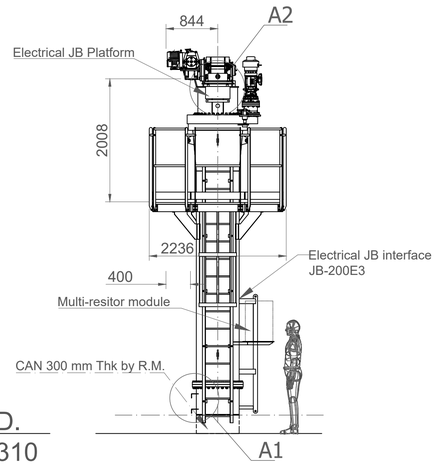
REV. 02

F.to UNI A3: 420mmx297mm

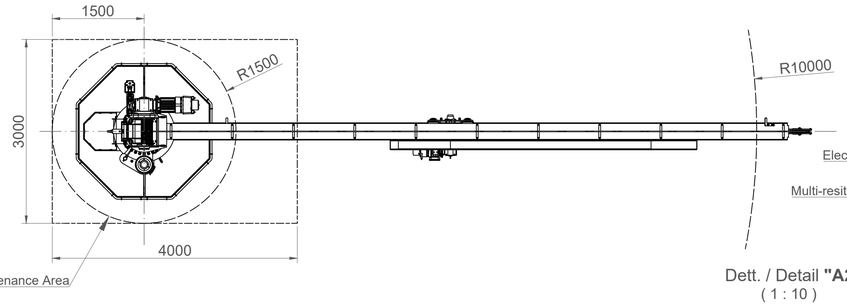
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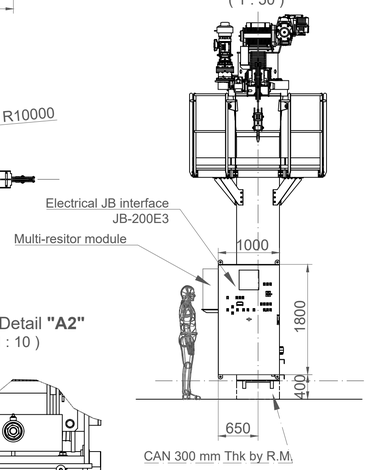
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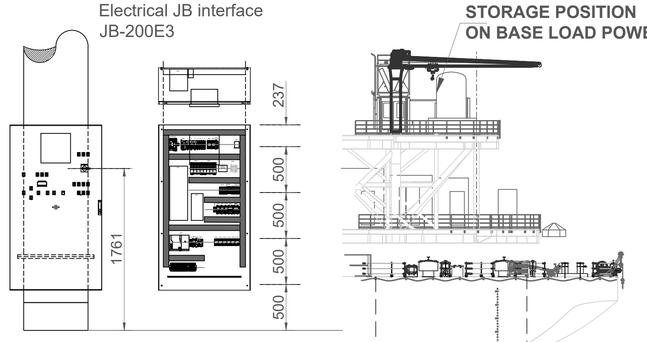




Vista da / View from **"V1"**
(1 : 50)

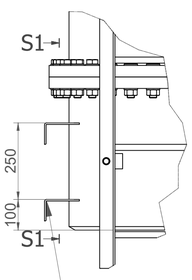






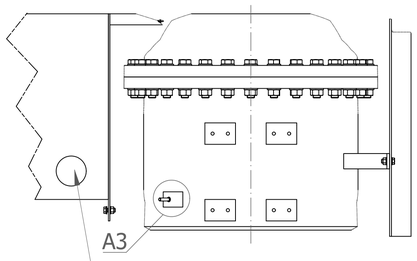
STORAGE POSITION
ON BASE LOAD POWER HUB

Dett. / Detail **"A1"**
(1 : 10)



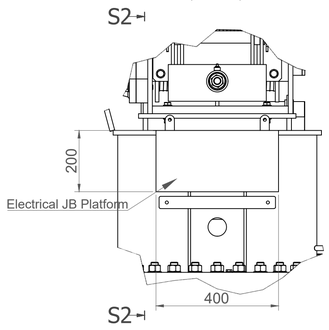
WELDED "L" PROFILE
For supports cable ladder

Sez. / Sec. **"S1-S1"**
(1 : 10)

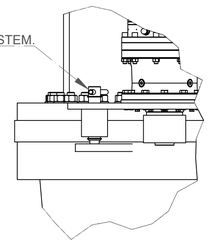


EL. CABLE IN DN32
For cable by R.M.

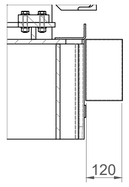
Dett. / Detail **"A2"**
(1 : 10)



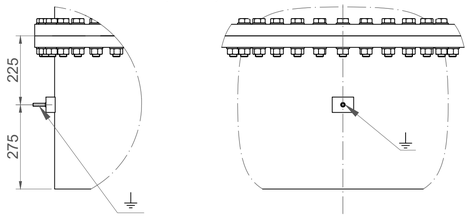
Dett. / Detail **"A3"**
(1 : 10)



Sez. / Sec. **"S2-S2"**
(1 : 10)



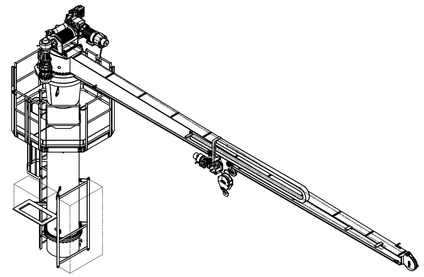
Dett. / Detail **"A3"**
(1 : 10)



EARTING POINT
Threaded stud, Ø16mm, L.30mm, material S355J2+N

Material :
S355 J2+N

Painting Color :
RAL Code: 7038.



EL.	Description Eng	MATERIAL	Q.TY	WEIGHT
3	Travelling Trolley Assembly	S 355 J2+N UNI EN 10025	1	256,01 kg
2	Boom Assembly	S 355 J2+N UNI EN 10025	1	2542,26 kg
1	Fixed Column Ass.	S 355 J2+N UNI EN 10025	1	1241 kg

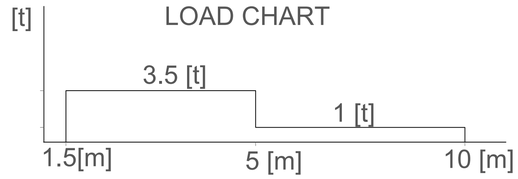
Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

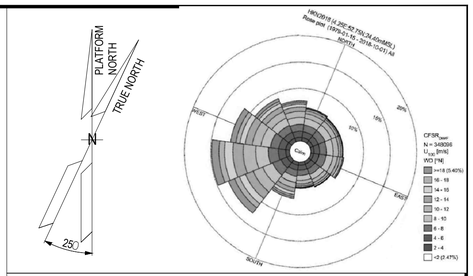
Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)

Test load:

5.6[t]x5[m] - 1.6[t]x10[m]
in according to DNV-ST-0378 rules



Description	Q.ty	Notes
CRANE TYPE		PLATFORM CRANE OFF-SHORE
LIFTING CAPACITY	3.5[t] 1.5-5[m] 1[t] 1.5-10[m]	STEEL ROPE HOIST WINCH
HOOK STROKE	40[m]	Electric driven by gearbox Brake on the El. Motor
LIFTING SPEED	3.75/15[m/min]	Variable speed motor
Hoist winch stroke (radial movement)	1.5-10[m]	Eletric driven rack - pinion system
RADIAL SPEED	2-8[m/min]	
PRELIMINARY WEIGHT	6000[kg]	
ROTATIONAL MOVEMENT	0-180°	By electric Motor Geqarbox Pinion on slewing bearing
ROTATIONAL SPEED	0.25/0.5[rpm]	Variable speed motor
WORKING TEMPERATURE	-9/45[°C]	
HAZAEDOUS AREA:		SAFE AREA
PERSONEL LIFT		NO
POWER SUPPLY	400[v]/3Ph/50[hZ] (3Ph+N)	
TOTAL POWER ABS.	20[kW]	



NOTES

LEGEND

HOLDS

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	05/11/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
3	20/09/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
2	21/08/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

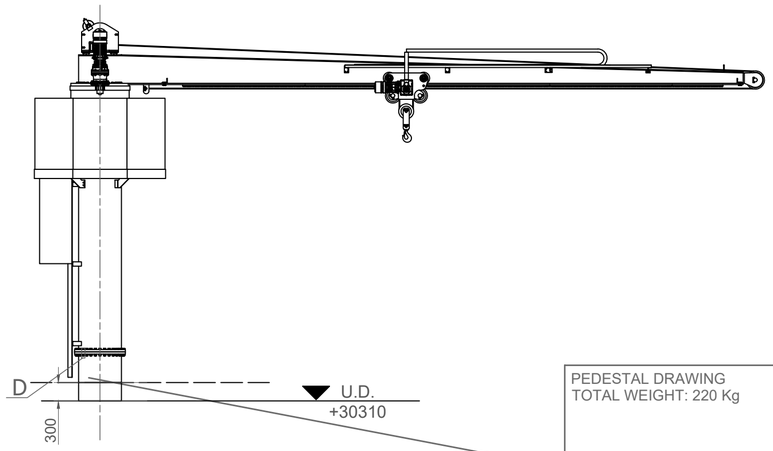
TITLE : 123A90A – Base Load Power Hub Platform
CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE	18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00009		SHEET 001	REV. 4

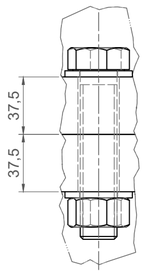
File Name : 1724001010-MAC-DA-00009

DRAWING NO. 1724001010-MAC-DA-00010

REV. 1

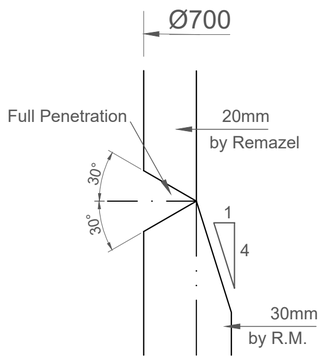


Dett. / Detail **"D"**
(1 : 2)

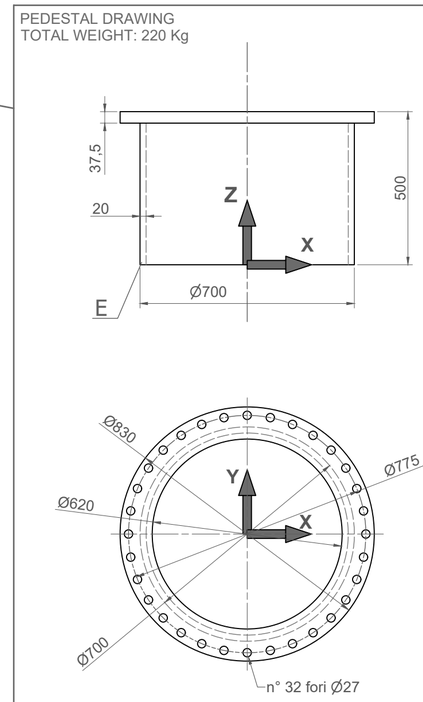


-n° 32 screws M24 - class 10.9

Dett. / Detail **"E"**



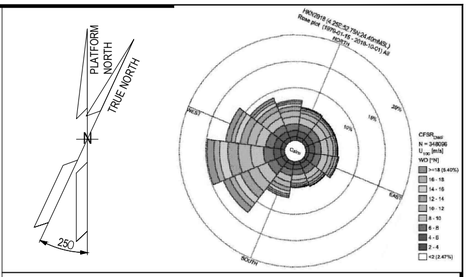
PEDESTAL DRAWING
TOTAL WEIGHT: 220 Kg



Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)



NOTES

LEGEND

HOLDS

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 123A90A – Base Load Power Hub Platform
PEDESTAL ADAPTOR CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE 18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00010	SHEET 001	REV. 1

File Name : 1724001010-MAC-DA-00010

BASE LOAD POWER HUB (BLPH)

DAVIT CRANE

WIRING DIAGRAM

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3	DRAWING NO.	SHEET	REV.
	1724001010-MAC-DG-00012	1	03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

REV.	SHEET NUMBER	DESCRIPTION	REF. CODE
02	1	FRONT PAGE	
02	2	SUMMARY and GENERAL NOTES	
02	10	SYMBOLS LEGEND	
03	30	INCOMING POWER LINE	
02	32	ENCLOSURE SERVICE	
02	34	UPS AND STANDSTILL HEATERS	
02	40	24Vdc SUPPLY	
02	50	HOISTING VFD CONNECTIONS	
02	52	ROTATION AND TROLLEY VFD CONNECTIONS	
02	54	ROTATION AND TROLLEY MOTORS	
02	56	MOTOR BRAKES	
02	60	CPU	
02	62	SAFETY MODULES	
02	64	SAFETY MODULES	
02	66	DIGITAL INPUT	
02	68	DIGITAL INPUT	
02	70	DIGITAL INPUT	
02	72	DIGITAL INPUT	
02	74	DIGITAL OUTPUT	
02	76	DIGITAL OUTPUT	
02	78	ANALOG INPUT AND OUTPUT	
02	80	LOAD CELL	
02	82	HOISTING AND ROTATION ENCODERS	
02	84	TROLLEY ENCODER	
02	86	MOPS COMMAND	
02	90	TERMINAL STRIP X01	
02	92	TERMINAL STRIP XS1	
02	94	TERMINAL STRIP JB / X02	

GENERAL NOTES

1:

2:

3:

4:

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CROSSWIND

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 2

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

	MANUAL POWER DISCONNECTING SWITCH		FAN		
	FUSE POWER DISCONNECTING SWITCH		STANDSTILL HEATER		
	THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY OPEN THERMOSTAT		
	DIFFERENTIAL THERMAL-MAGNETIC CIRCUIT BREAKER		NORMALLY CLOSE THERMOSTAT		
	CONTACTOR / RELE' COIL		LAMP		
	POWER CONTACT		EMERGENCY PUSH BUTTON		
	NORMALLY OPEN CONTACT		NORMALLY OPEN PUSH BUTTON		
	NORMALLY CLOSE CONTACT		NORMALLY OPEN KEY SELECTOR		
	SWITCHING POWER SUPPLY		NORMALLY CLOSE LIMIT SWITCH		
	MOTOR		INDUCTIVE LIMIT SWITCH		
	MOTOR THERMAL PROTECTION		HORN		
	ENCODER		LOAD CELL		
	MOTOR BRAKE		PROTECTIVE EARTH		
	SERVICE SOCKET				

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CROSSWIND

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REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SYMBOLS LEGEND

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

SCALE : NTS

A3

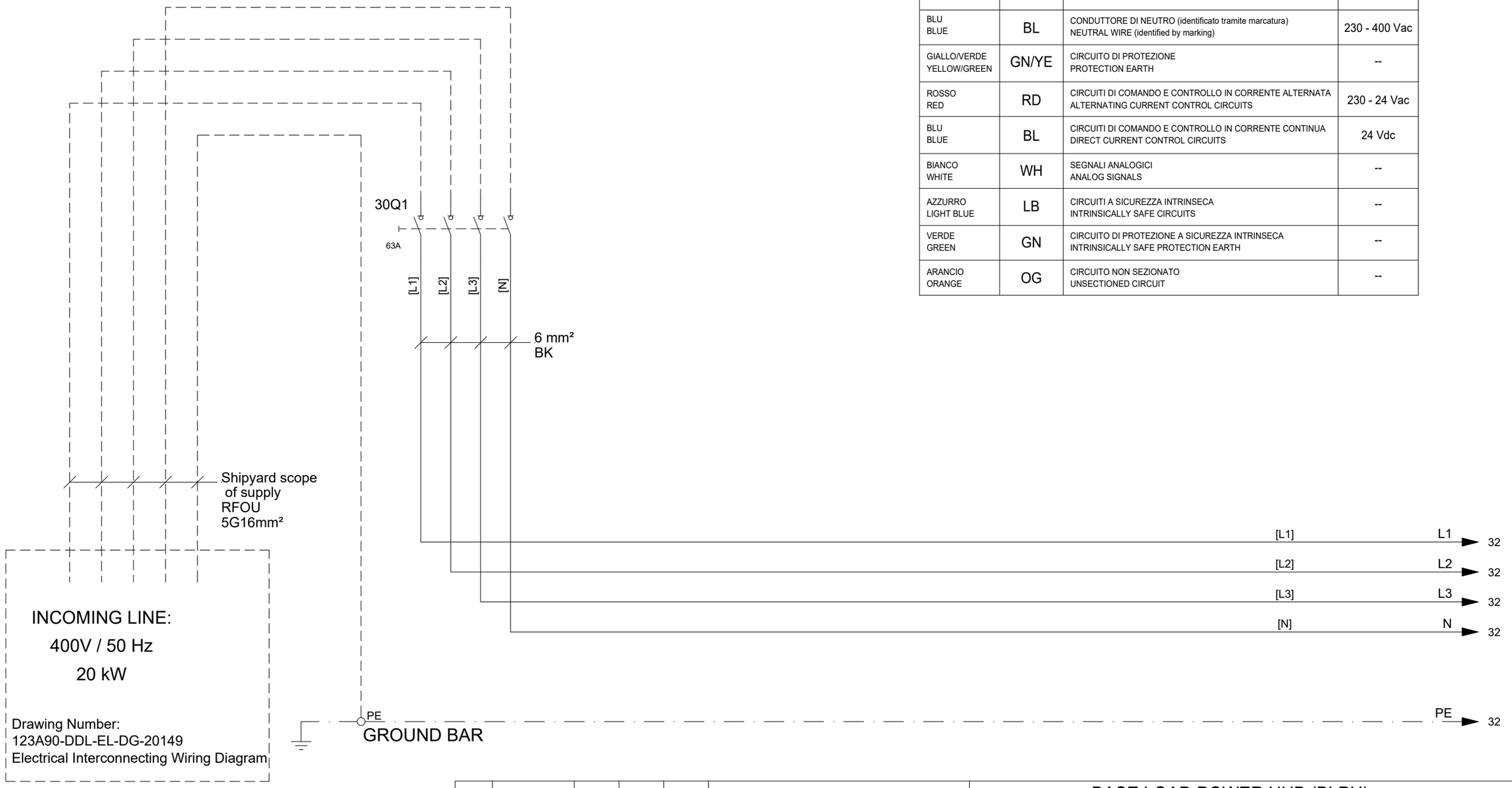
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 10

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



IDENTIFICAZIONE CONDUTTORI
WIRES IDENTIFICATION (CEI EN 60204-32)

COLORE COLOR	LEGENDA LEGEND	TIPO DI CIRCUITO CIRCUIT TYPE	TENSIONE VOLTAGE
NERO BLACK	BK	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	690 - 400 Vac
ROSSO RED	RD	CIRCUITI DI ALIMENTAZIONE IN CORRENTE ALTERNATA ALTERNATING CURRENT SUPPLY CIRCUITS	230 Vac
BLU BLUE	BL	CONDUTTORE DI NEUTRO (identificato tramite marcatura) NEUTRAL WIRE (identified by marking)	230 - 400 Vac
GIALLO/VERDE YELLOW/GREEN	GN/YE	CIRCUITO DI PROTEZIONE PROTECTION EARTH	--
ROSSO RED	RD	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE ALTERNATA ALTERNATING CURRENT CONTROL CIRCUITS	230 - 24 Vac
BLU BLUE	BL	CIRCUITI DI COMANDO E CONTROLLO IN CORRENTE CONTINUA DIRECT CURRENT CONTROL CIRCUITS	24 Vdc
BIANCO WHITE	WH	SEGNALI ANALOGICI ANALOG SIGNALS	--
AZZURRO LIGHT BLUE	LB	CIRCUITI A SICUREZZA INTRINSECA INTRINSICALLY SAFE CIRCUITS	--
VERDE GREEN	GN	CIRCUITO DI PROTEZIONE A SICUREZZA INTRINSECA INTRINSICALLY SAFE PROTECTION EARTH	--
ARANCIO ORANGE	OG	CIRCUITO NON SEZIONATO UNSECTIONED CIRCUIT	--

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
INCOMING POWER LINE

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 30

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

30 L1 [L1] [L1] L1 34
30 L2 [L2] [L2] L2 34
30 L3 [L3] [L3] L3 34
30 N [N] [N] N 34
30 PE PE 34

[L1] [L2] [L3] [N] 1,5 mm² BK x 3 + BL

[L1] [N] 1,5 mm² RD + BL + GN/YE

[L2] [N] 1,5 mm² RD + BL + GN/YE

32Q1 1 3 5 2 4 6 2A

32Q2 1 3 C 6A 2 4

32Q3 2A

32E1 Stigo ZR 011 11 12 23 24

1,5 mm² BK

[32-1] [32-1] [32-2] [32-3] [32-4]

[32-5] [32-6]

[32-7] [32-8]

66 32KA1 32HL1 32HL2 32HL3

32X1

32R1 32E2 M 1AC

400Vac VOLTAGE PRESENCE

ELECTRIC SOCKET

HEATER FAN

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ENCLOSURE SERVICE

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

SCALE : NTS

A3

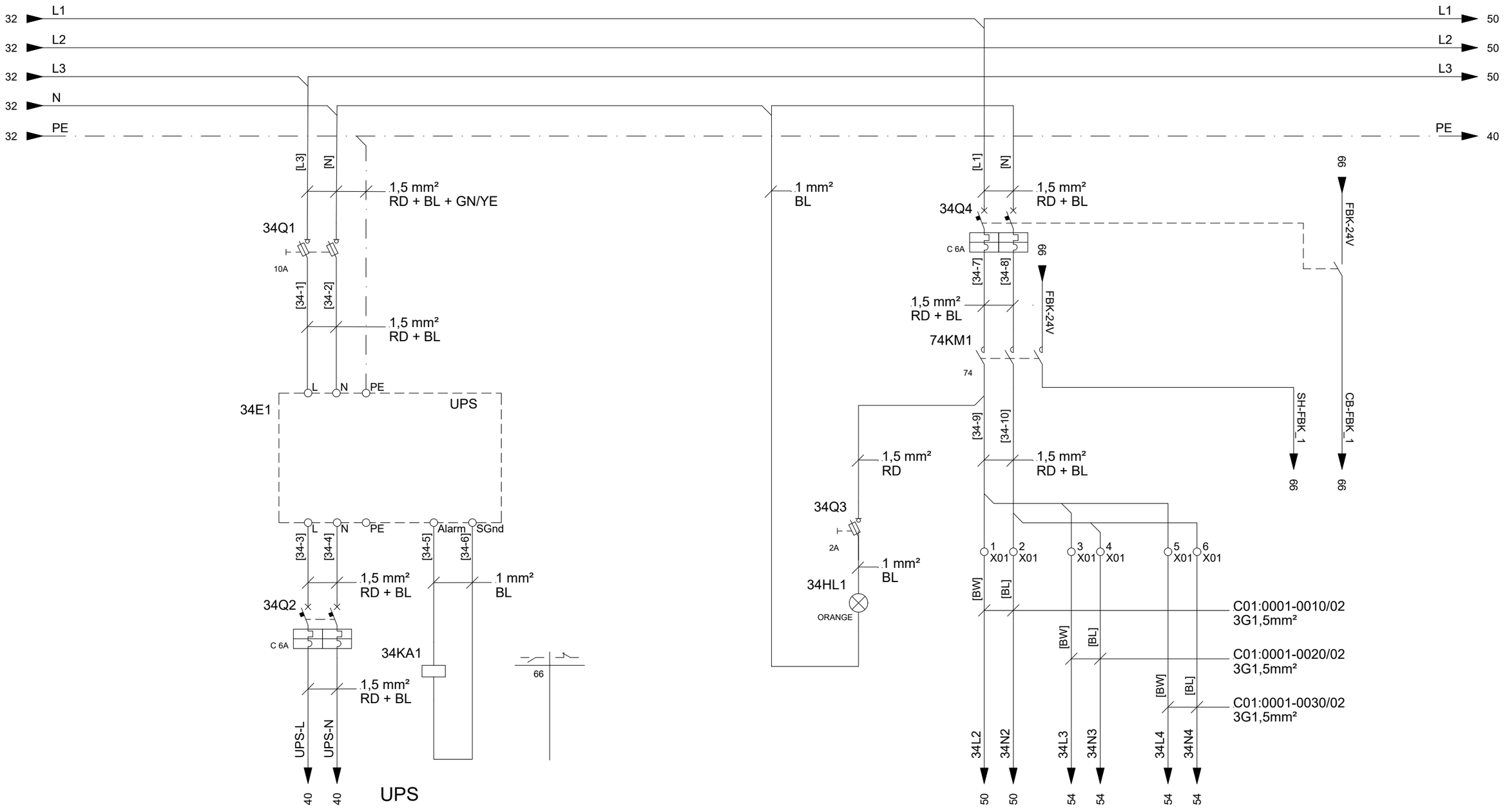
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 32

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



STANDSTILL HEATERS

REMAZEL ENGINEERING

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
UPS AND STANDSTILL HEATERS

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

SCALE : NTS

A3

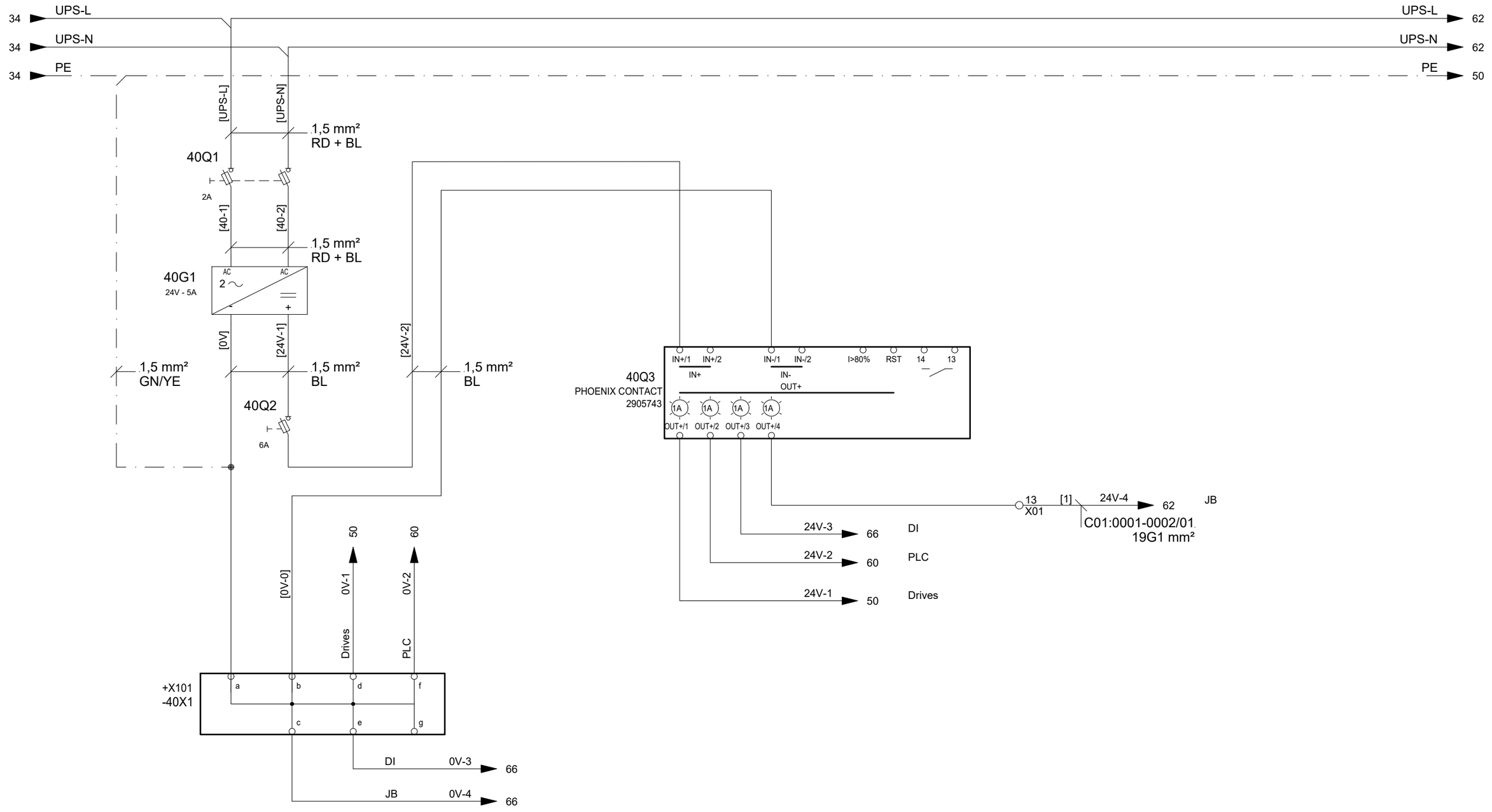
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 34

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
24Vdc SUPPLY

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

SCALE : NTS

A3

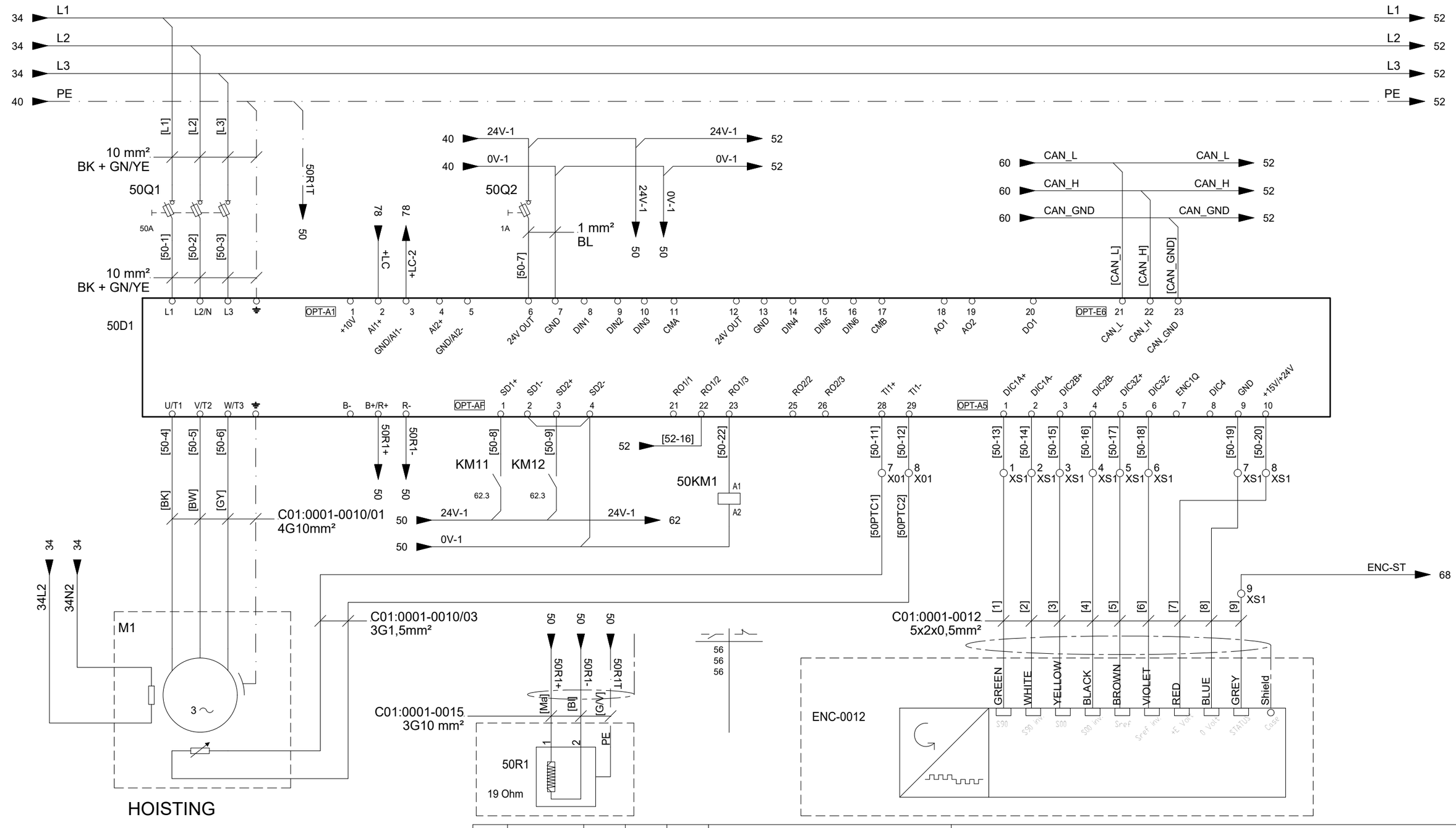
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 40

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING VFD CONNECTIONS

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

SCALE : NTS

A3

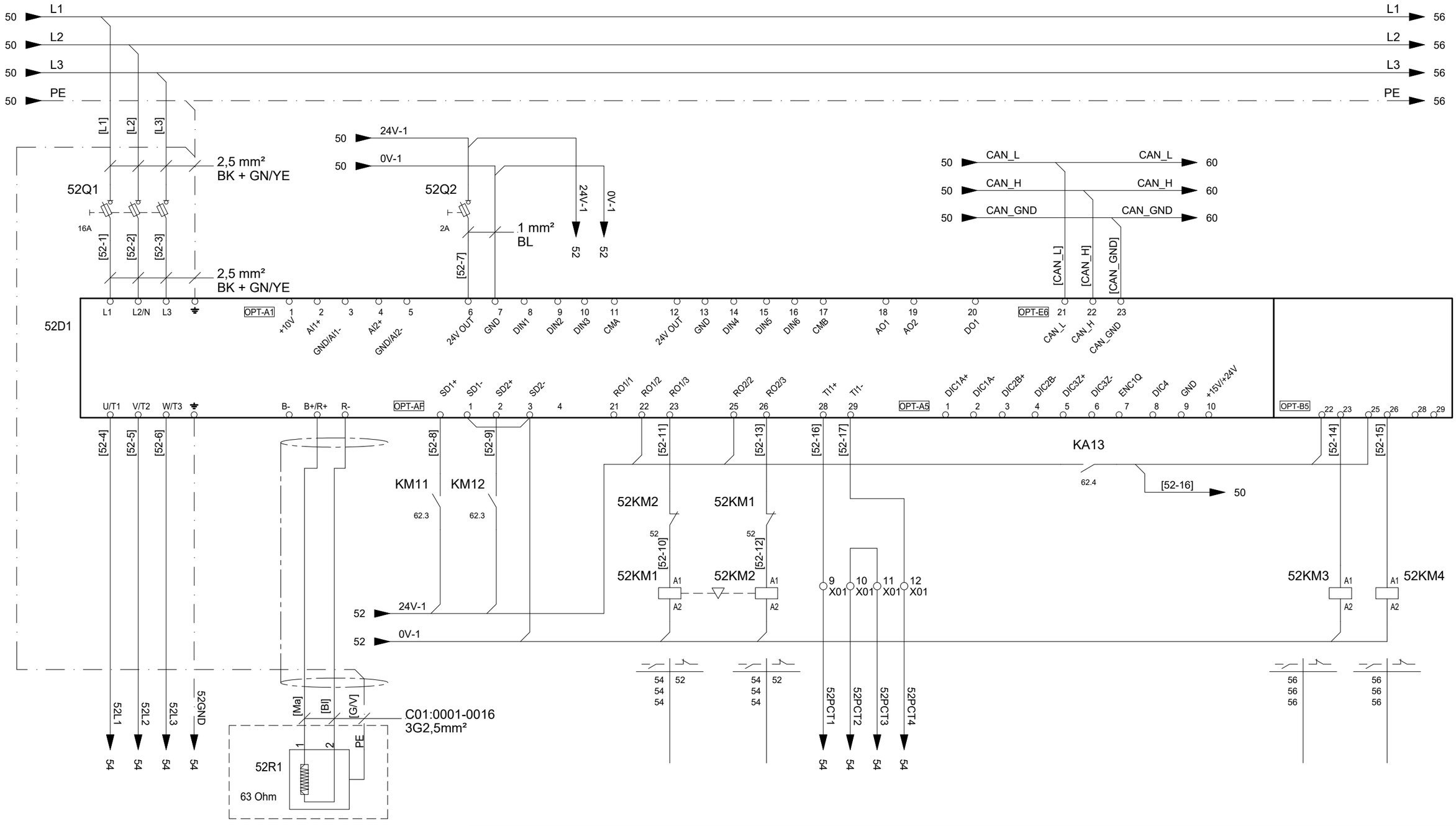
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 50

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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e-mail : info@remazel.com / website : www.remazel.com

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY VFD CONNECTIONS

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

SCALE : NTS

A3

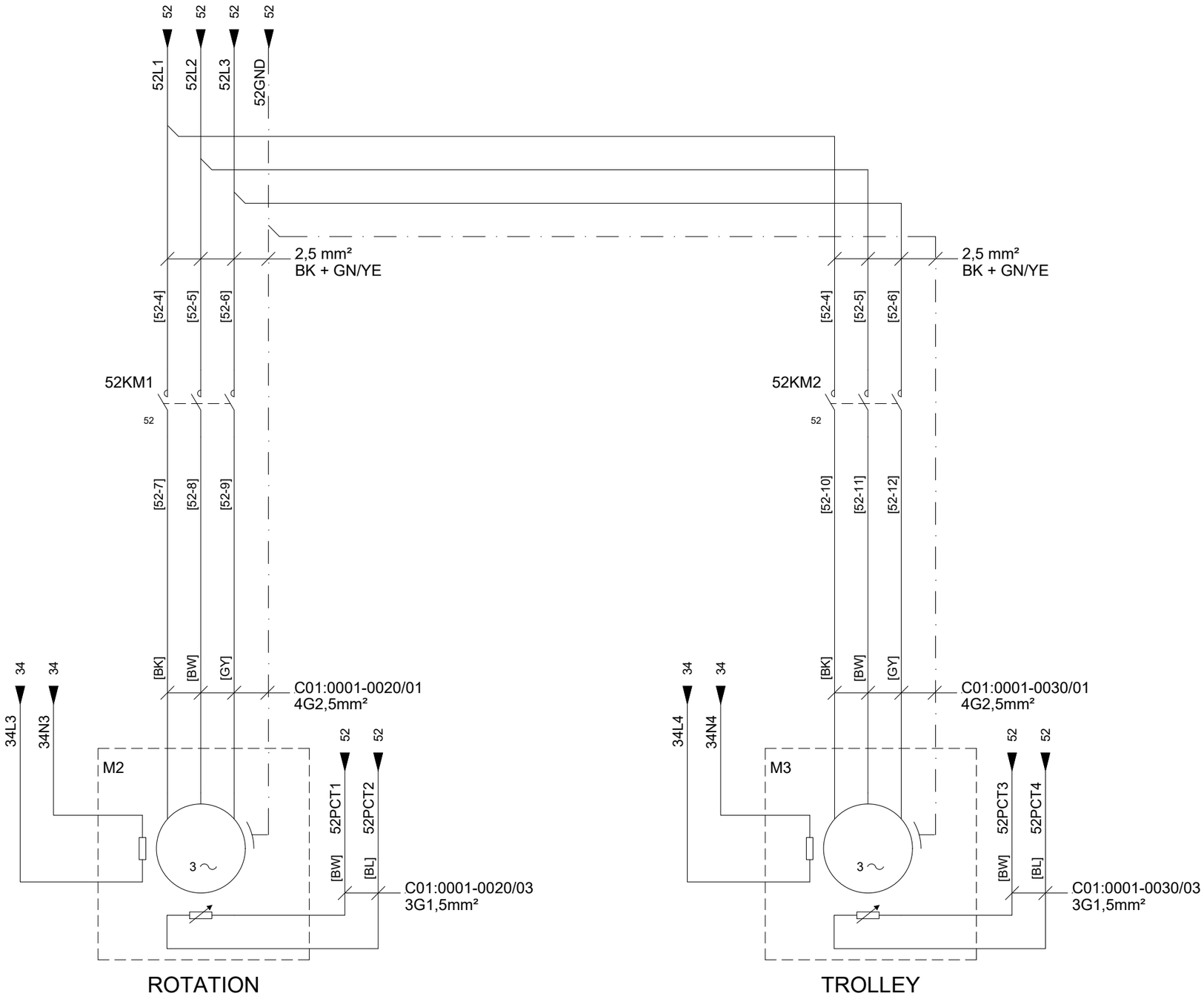
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 52

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ROTATION AND TROLLEY MOTORS

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

SCALE : NTS

A3

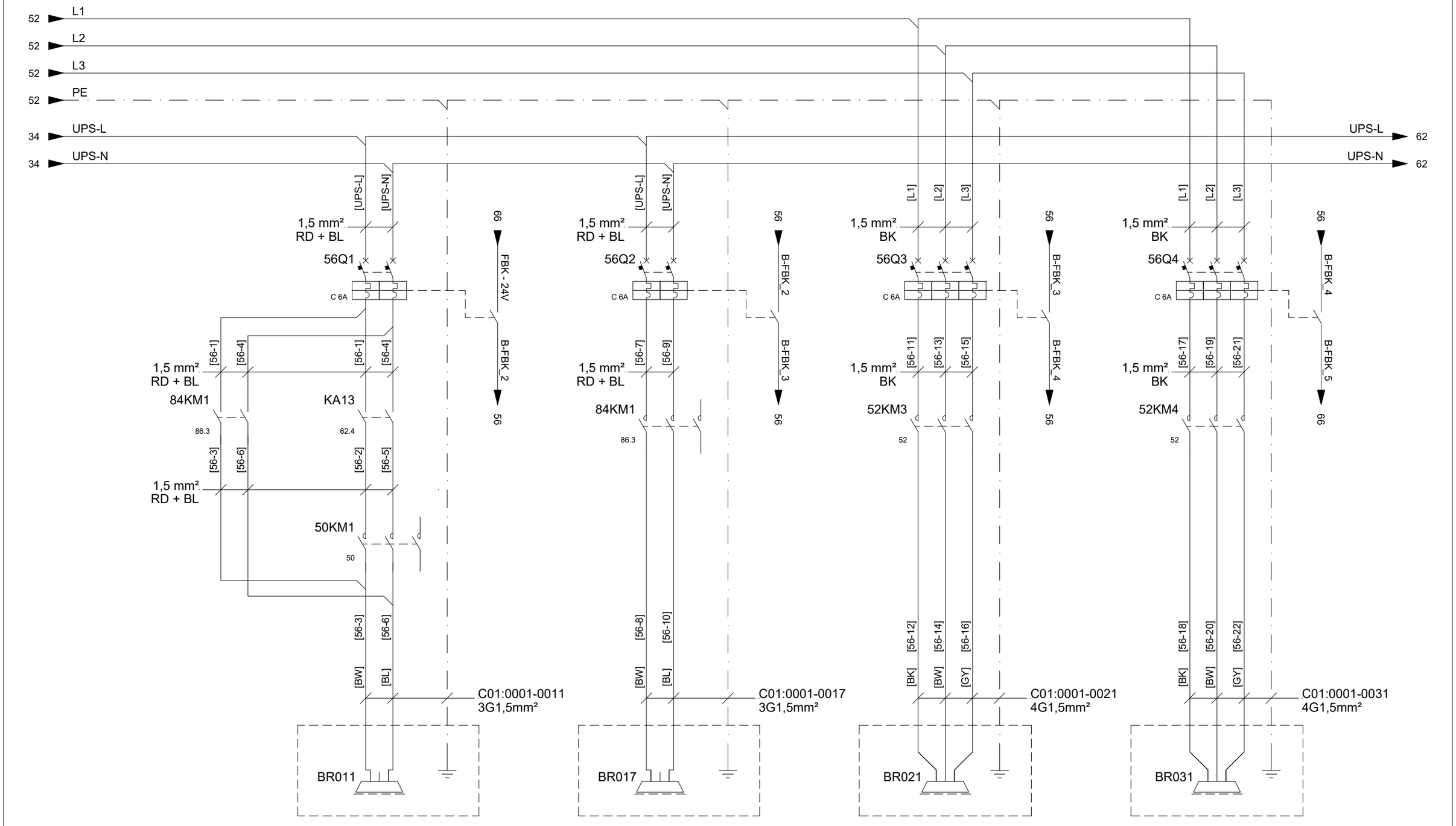
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 54

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOTOR BRAKES

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

SCALE : NTS

A3

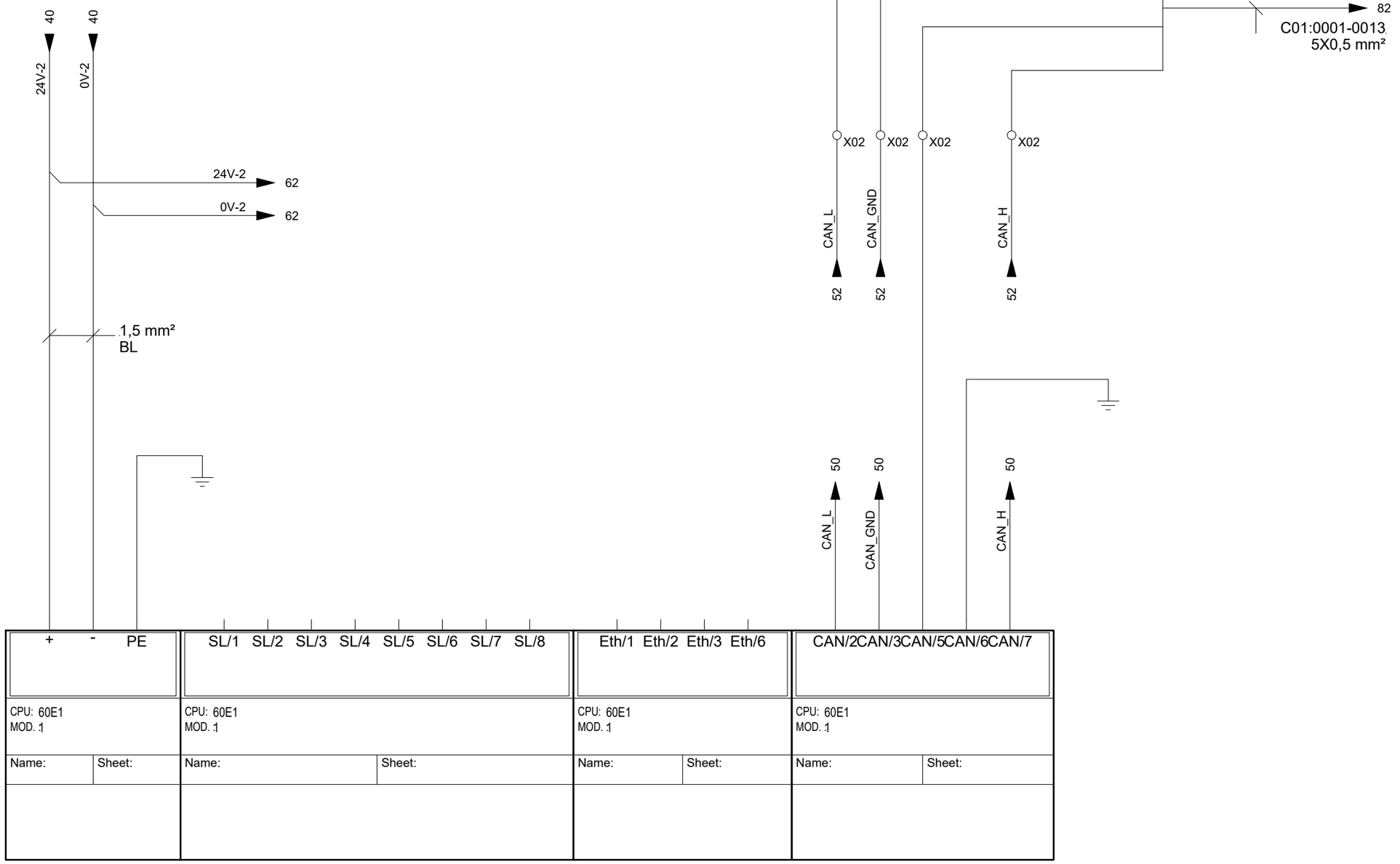
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 56

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



CPU

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
CPU

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

SCALE : NTS

A3

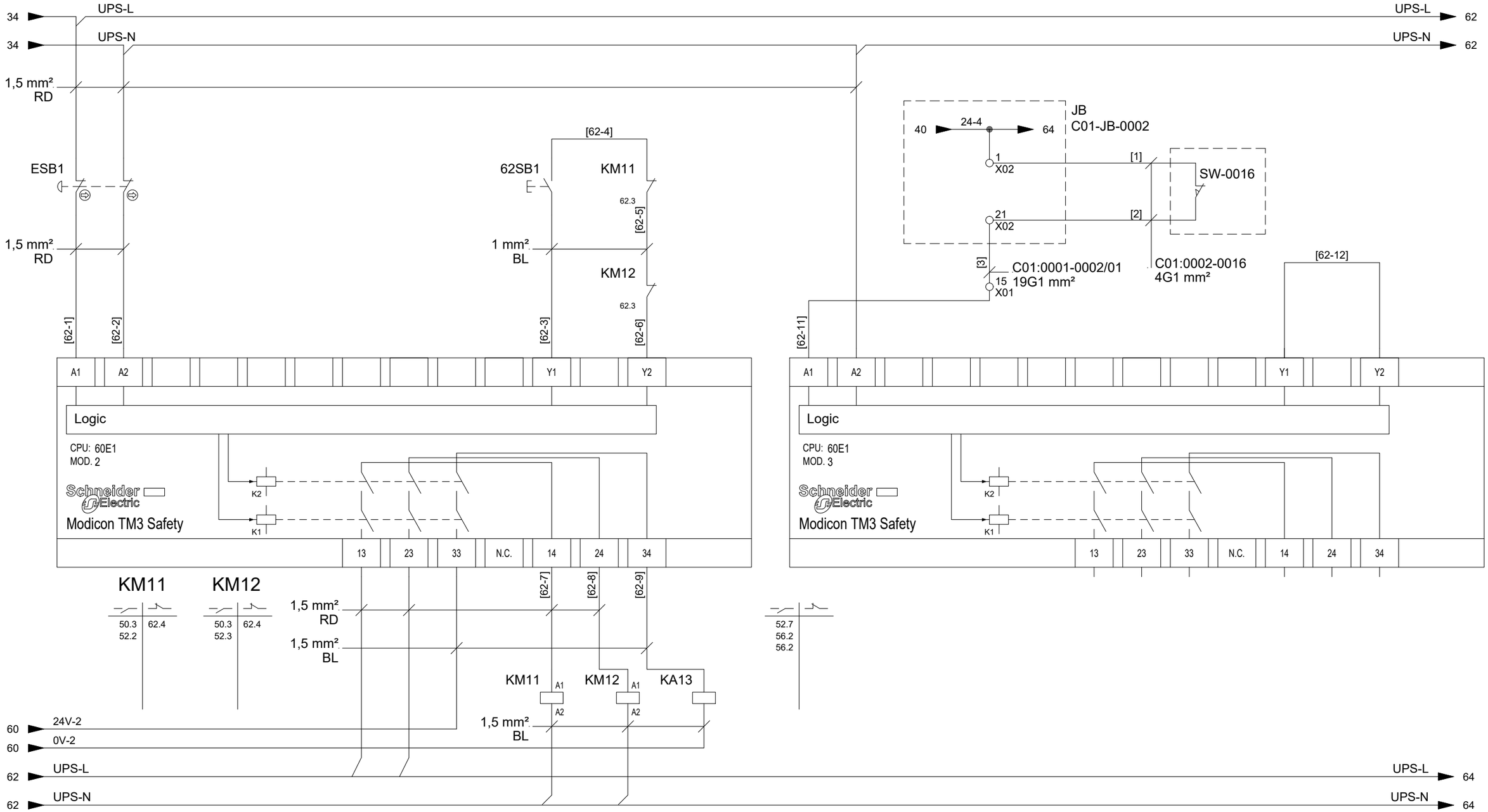
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 60

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



EESD

PAYOUT LIMIT

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 62

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

62 UPS-L → UPS-L 64

62 UPS-N → UPS-N 64

JB
C01-JB-0002

62 → 66

2 X02 [1] SW-0036

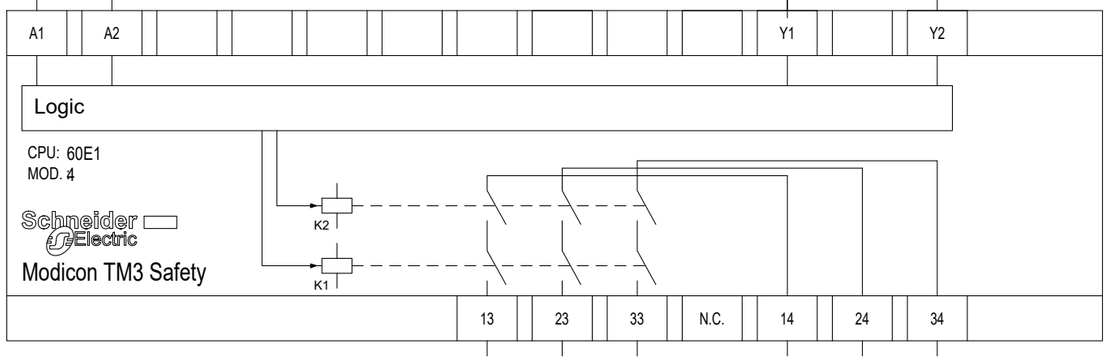
22 X02 [2]

[4] C01:0001-0002/01
16 19G1 mm²
X01

C01:0002-0036
4G1 mm²

[64-3]

[64-1]



64 UPS-L → UPS-L 86

64 UPS-N → UPS-N 86

A2B

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
SAFETY MODULES

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

SCALE : NTS

A3

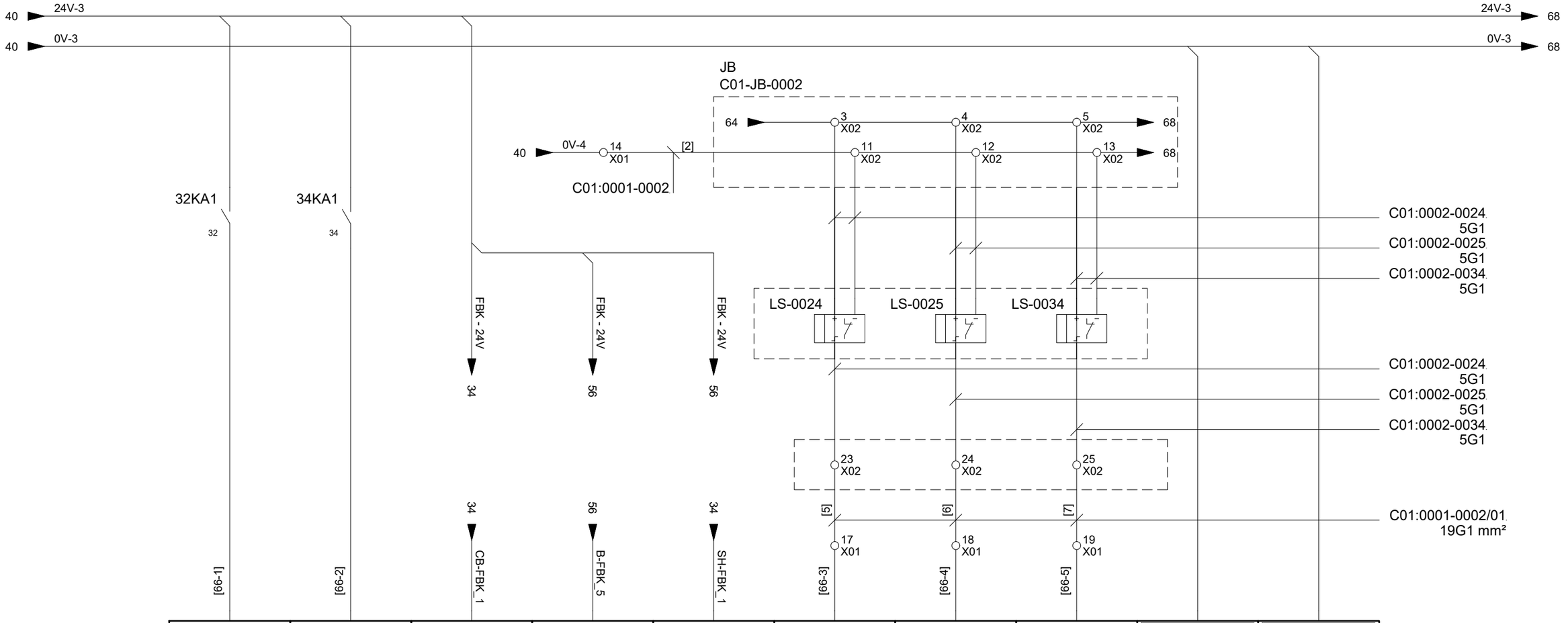
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 64

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



0	1	2	3	4	5	6	7	COM	COM
CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
400Vac OK	UPS STATUS OK	CB FEEDBACK	BRAKE CB FEEDBACK	STANDSTILL HEATERS FEEDBACK	LIMIT SWITCH ROTATION CW	LIMIT SWITCH ROTATION CCW	LIMIT SWITCH TROLLEY TRAVELING FORWARD		

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

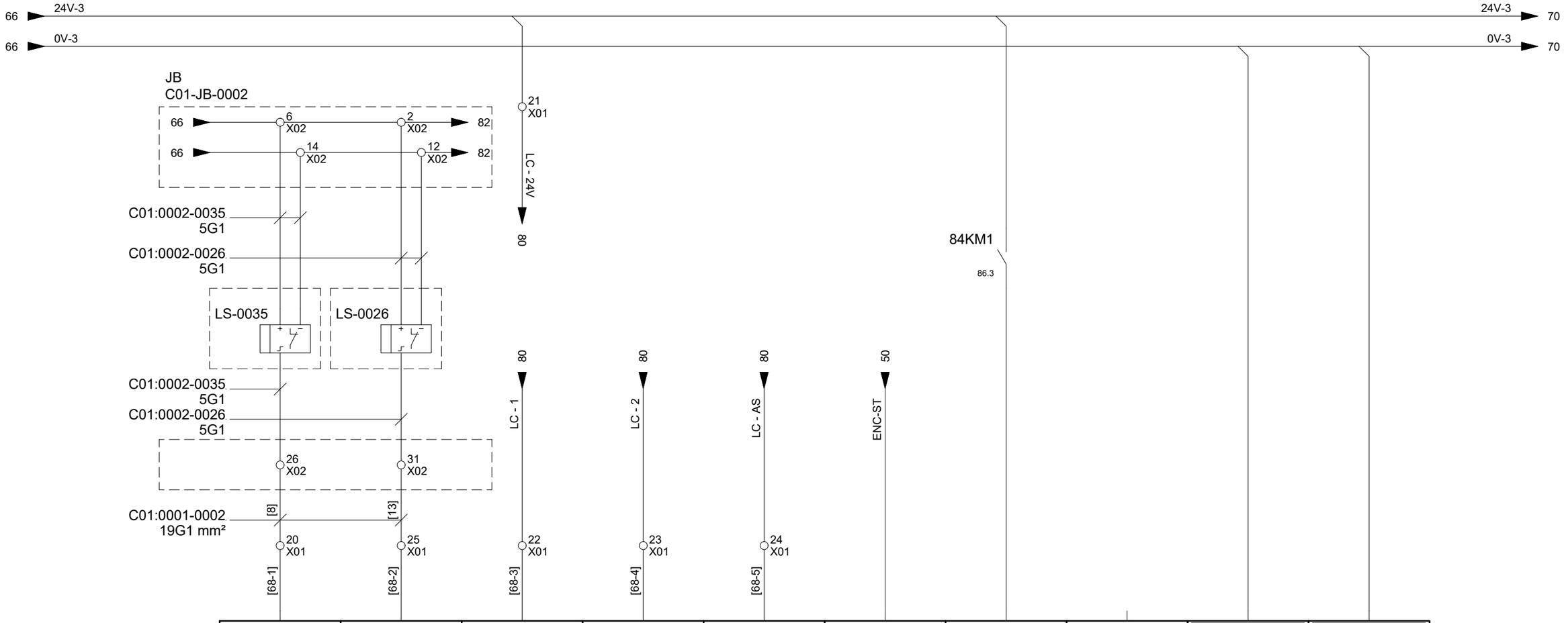
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 66 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5	CPU: 60E1 MOD. 5
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
LIMIT SWITCH TROLLEY TRAVELING BACKWARD	LIMIT SWITCH BLOCK PIN	OVERLOAD 1st LIMIT	OVERLOAD 2nd LIMIT	ANTISLACK	HOISTING ENCODER STATUS	MOPS ACTIVE	SPARE		

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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

SCALE : NTS

A3

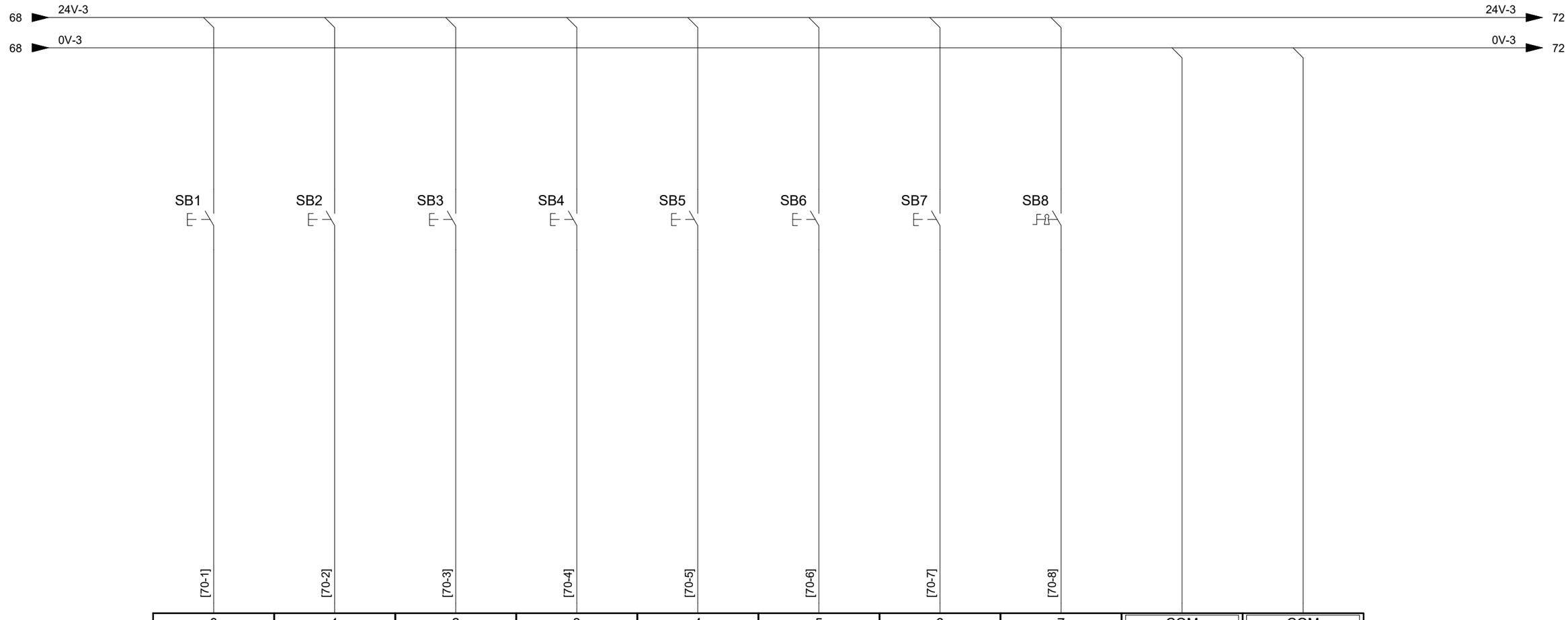
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 68

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



0	1	2	3	4	5	6	7	COM	COM
CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
ROTATION CW PUSH BUTTON	ROTATION CCW PUSH BUTTON	TROLLEY TRAVELING FORWARD PUSH BUTTON	TROLLEY TRAVELING BACKWARD PUSH BUTTON	HOISTING UP PUSH BUTTON	HOISTING DOWN PUSH BUTTON	SECOND SPEED PUSH BUTTON	OVERLOAD BYPASS		

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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 70 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

70 24V-3 → 24V-3 74

70 0V-3 → 0V-3 74

8	9	10	11	12	13	14	15	COM	COM
CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6	CPU: 60E1 MOD. 6
Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:	Name: Sheet:
SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE		

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ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL INPUT

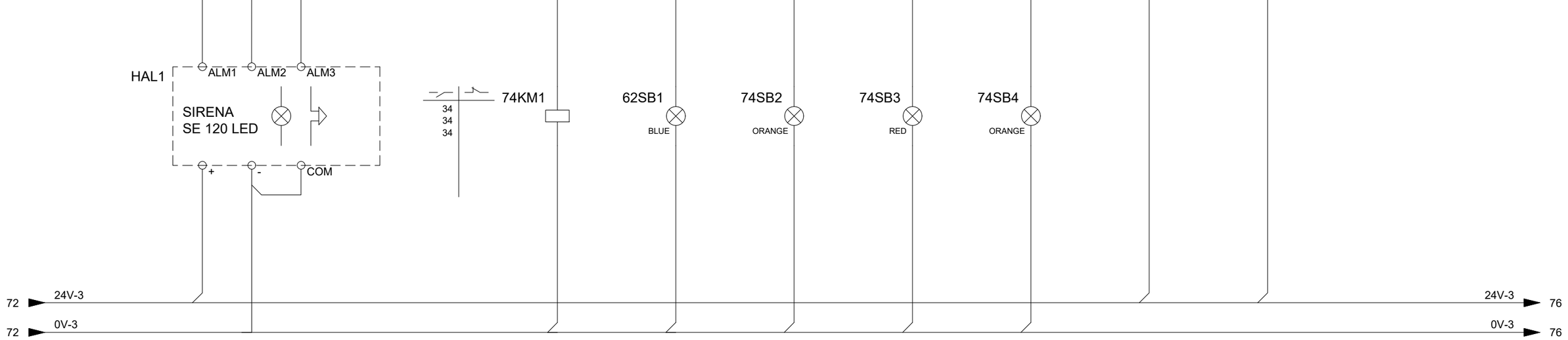
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 72 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

HORN COMAND		HORN STAGE 2		HORN STAGE 3		STANDSTILL HEATERS		RESET REQUEST		PIN ENGAGED		ALARM		OVERLOAD WARNING					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7	
0		1		2		3		4		5		6		7		COM0		COM0	



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 74

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

AOPS ACTIVATED		MOPS ACTIVATED		3.5 tonn LOAD LIMIT		1 tonn LOAD LIMIT		WARNING		SPARE		SPARE		SPARE					
Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:	Name:	Sheet:
CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7		CPU: 60E1 MOD. 7			
8		9		10		11		12		13		14		15		COM1		COM1	

76SB1 YELLOW

76SB2 YELLOW

76SB3 YELLOW

76SB4 YELLOW

76SB5 YELLOW

74 24V-3

74 0V-3

24V-3 78

0V-3 78

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ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
DIGITAL OUTPUT

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

SCALE : NTS

A3

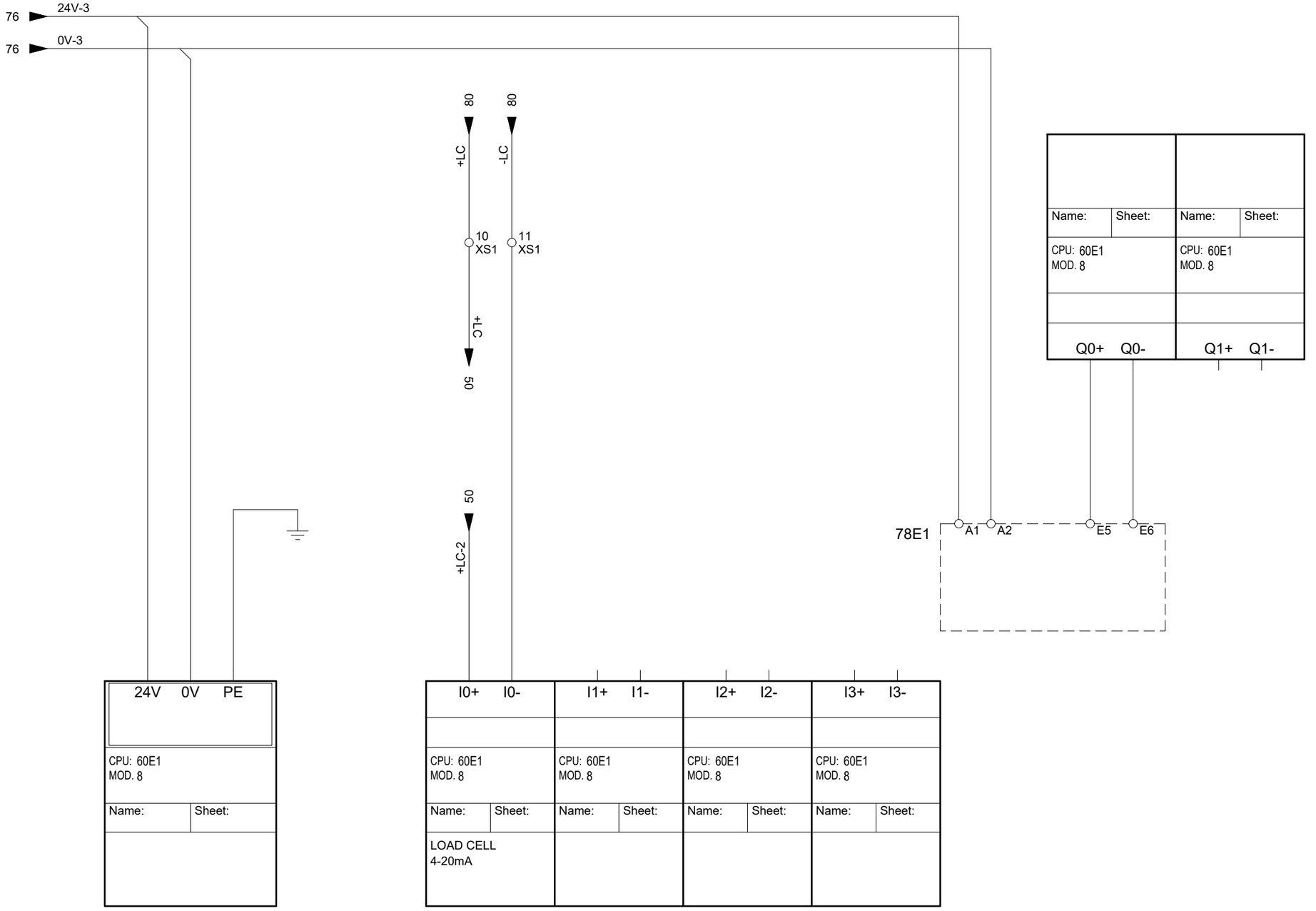
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 76

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
ANALOG INPUT AND OUTPUT

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

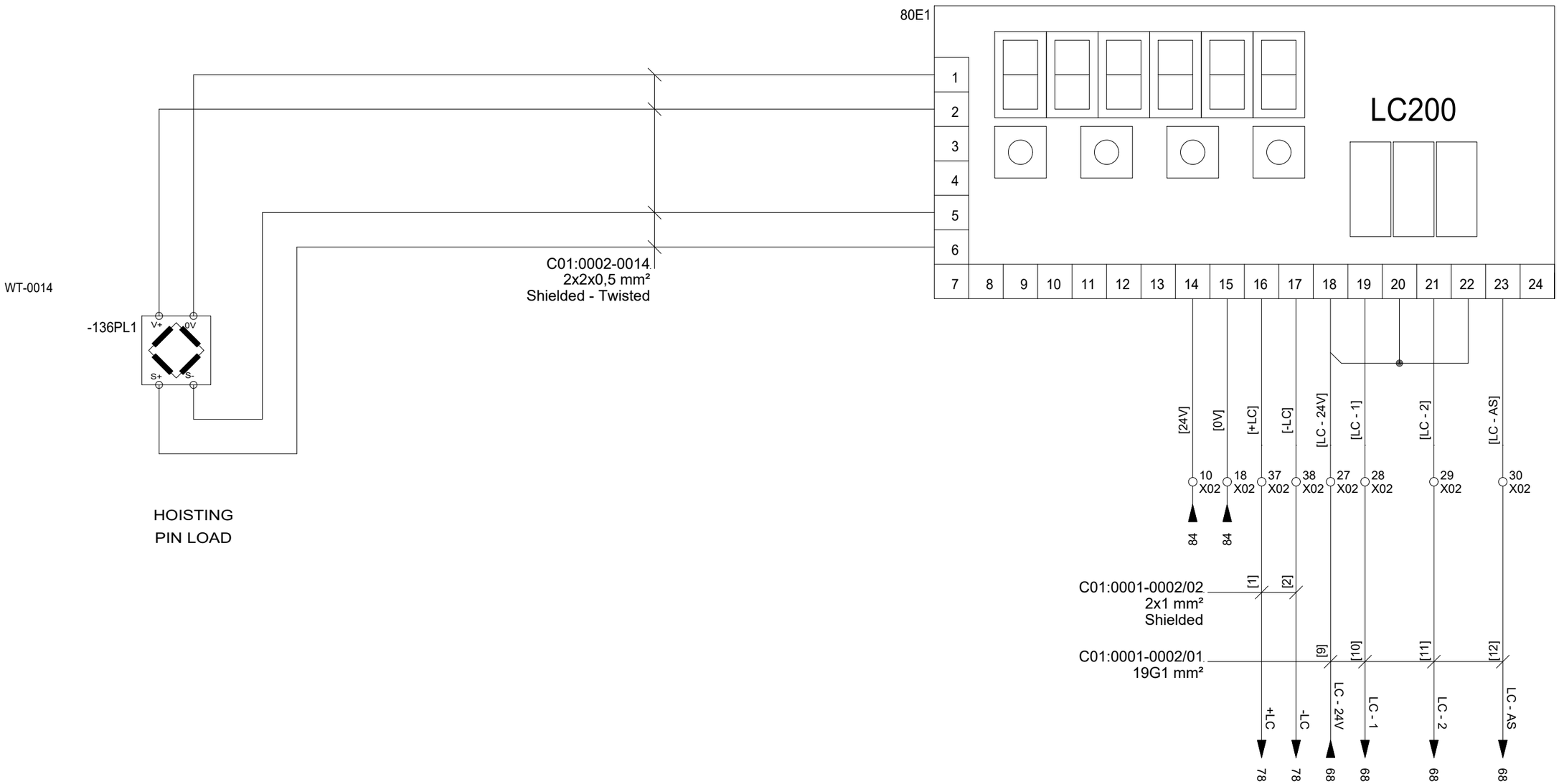
SHEET 78

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm

LOAD CELL AMPLIFIER



HOISTING
PIN LOAD

LOAD CELL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
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00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
LOAD CELL

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

SCALE : NTS

A3

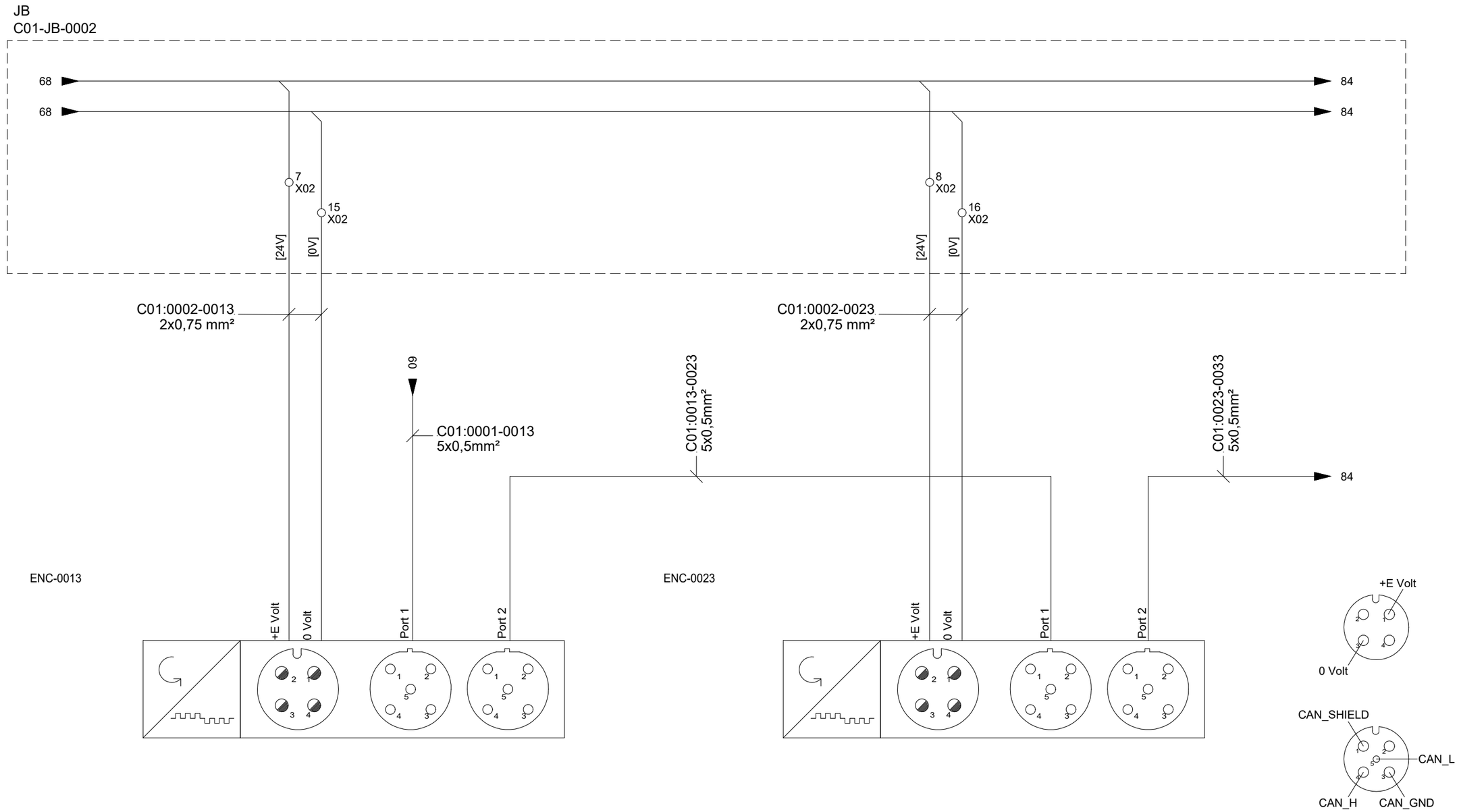
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 80

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
HOISTING AND ROTATION ENCODERS

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

SCALE : NTS

A3

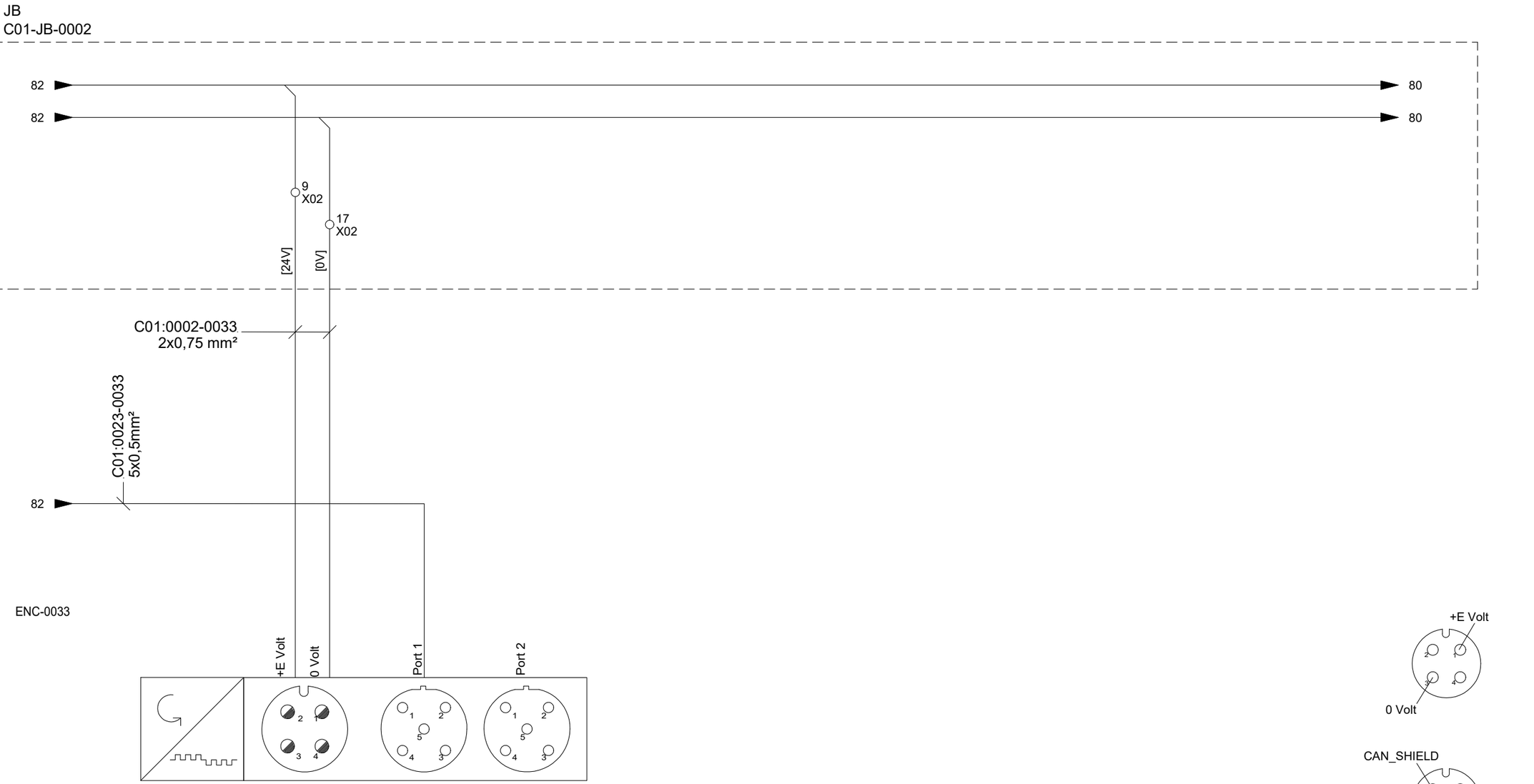
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 82

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND

ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

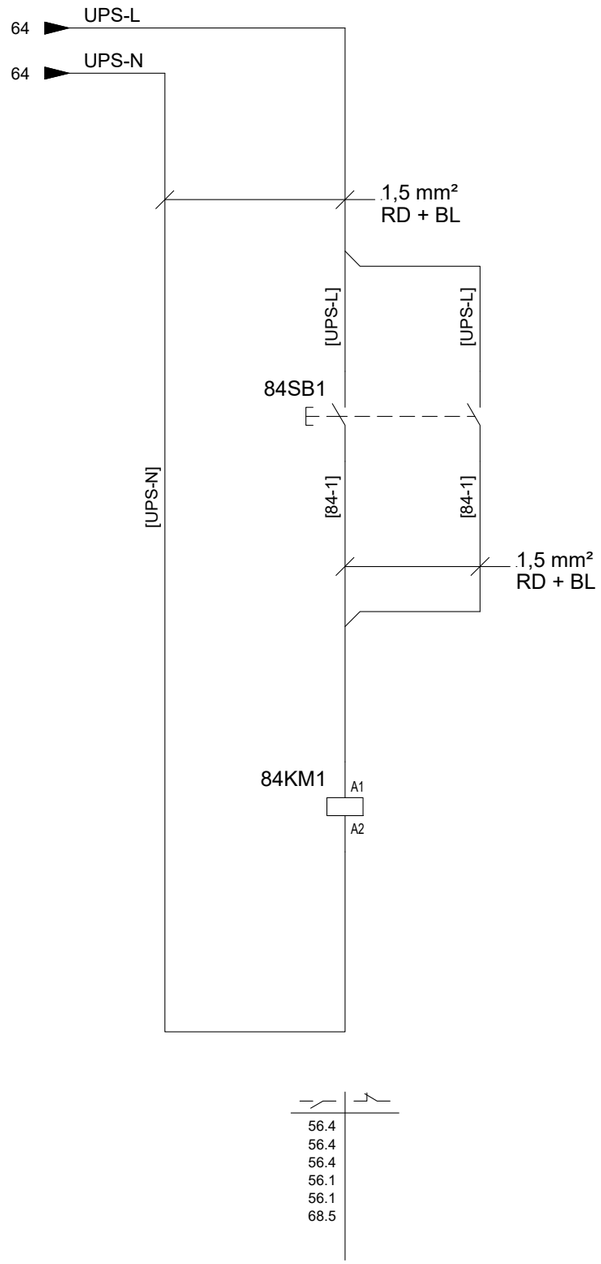
TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TROLLEY ENCODER

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 84 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

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CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
MOPS COMMAND

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

SCALE : NTS

A3

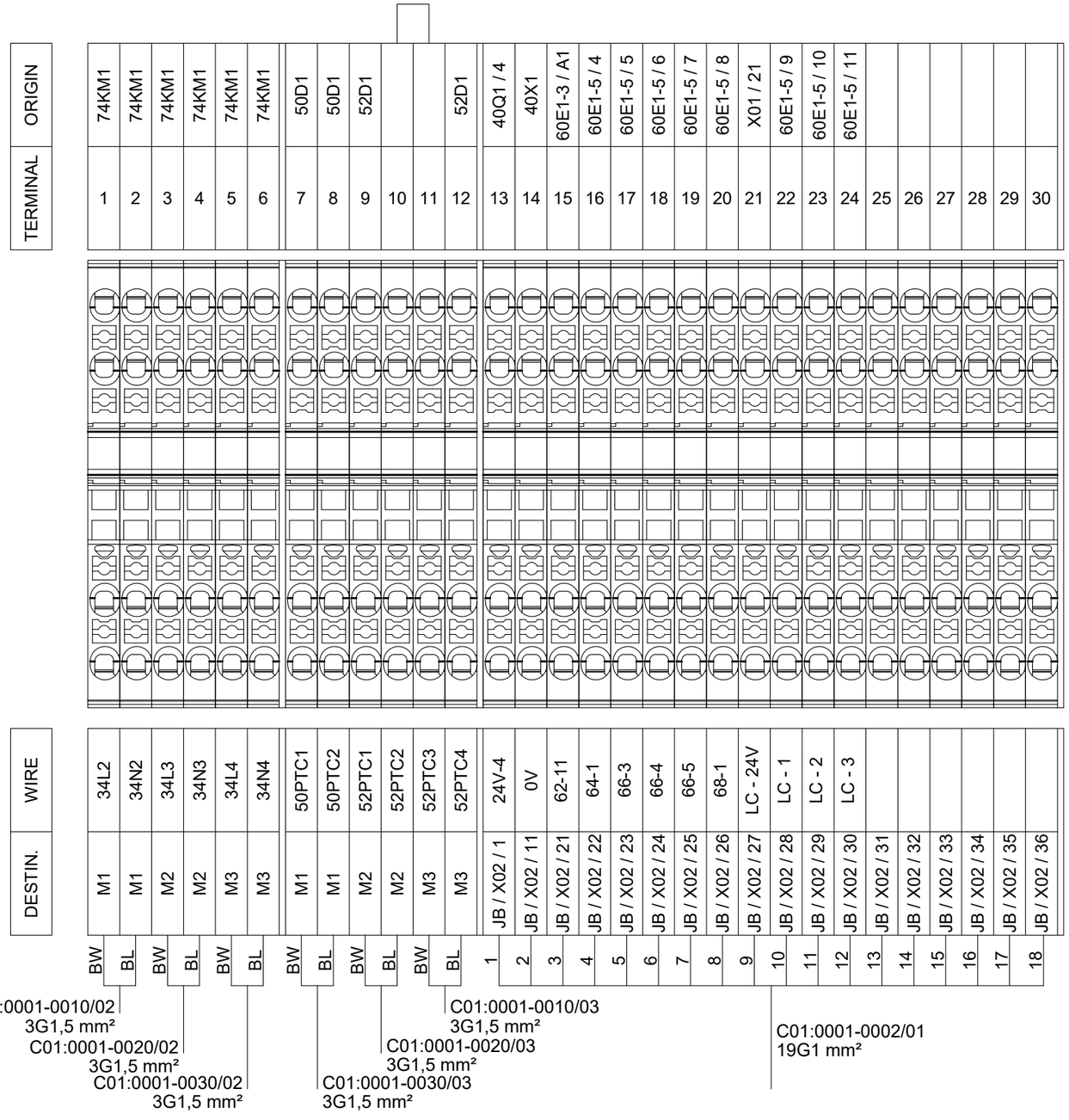
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 86

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP X01

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

SCALE : NTS

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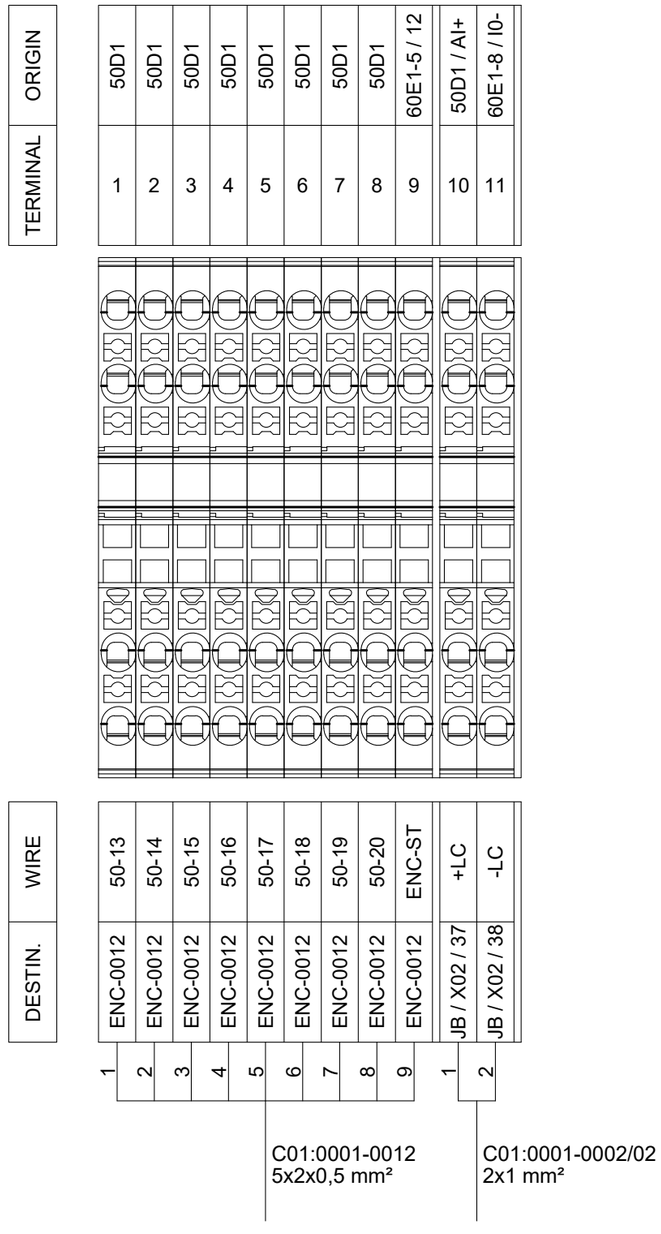
DRAWING NO. 1724001010-MAC-DG-00012

SHEET 90

REV. 03

File Name : 24-27012-WD-001 Rev. 03

F.to UNI A3: 420mmx297mm



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CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP XS1

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

A3 | DRAWING NO. 1724001010-MAC-DG-00012 | SHEET 92 | REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

TERMINAL	ORIGIN
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2	SW-0036
3	LS-0024
4	LS-0025
5	LS-0034
6	LS-0035
7	ENC-0013
8	ENC-0023
9	ENC-0033
10	80E1 / 14
11	LS-0024
12	LS-0025
13	LS-0034
14	LS-0035
15	ENC-0013
16	ENC-0023
17	ENC-0033
18	80E1 / 15
19	
20	
21	SW-0016
22	SW-0036
23	LS-0024
24	LS-0025
25	LS-0034
26	LS-0035
27	
28	80E1 / 19
29	80E1 / 21
30	80E1 / 23
31	LS-0026
32	
33	
34	
35	
36	
37	80E1 / 16
38	80E1 / 17

WIRE	DESTIN.
24V-4	X01 / 13
24V-4	LS-0026
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
24V-4	
0V	X01 / 14
0V	LS-0026
0V	
0V	
0V	
0V	
0V	
0V	
62-11	X01 / 15
64-1	X01 / 16
66-3	X01 / 17
66-4	X01 / 18
66-5	X01 / 19
68-1	X01 / 20
LC - 24V	X01 / 21
LC - 1	X01 / 22
LC - 2	X01 / 23
LC - 3	X01 / 24
68-2	X01 / 25
	X01 / 26
	X01 / 27
	X01 / 28
	X01 / 29
	X01 / 30
+LC	50D1 / AI+
-LC	60E1-8 / I0-

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 1 2

C01:0001-0002/01
19G1 mm²

C01:0001-0002/02
2X1 mm² shielded

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e-mail : info@remazel.com / website : www.remazel.com
CROSSWIND
ROSETTI MARINO

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	22/10/2024	MPR	GBA	ATR	ACCEPTED FOR CONSTRUCTION (AFC)
02	26/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
01	03/09/2024	MPR	GBA	ATR	ISSUE FOR REVIEW (IFR)
00	26/07/2024	MPR	GBA	ATR	ISSUE FOR COMMENT (IFC)

TITLE : BASE LOAD POWER HUB (BLPH)
DAVIT CRANE WIRING DIAGRAM
TERMINAL STRIP JB / X02

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

SCALE : NTS

A3

DRAWING NO. 1724001010-MAC-DG-00012

SHEET 94

REV. 03

F.to UNI A3: 420mmx297mm

File Name : 24-27012-WD-001 Rev. 03

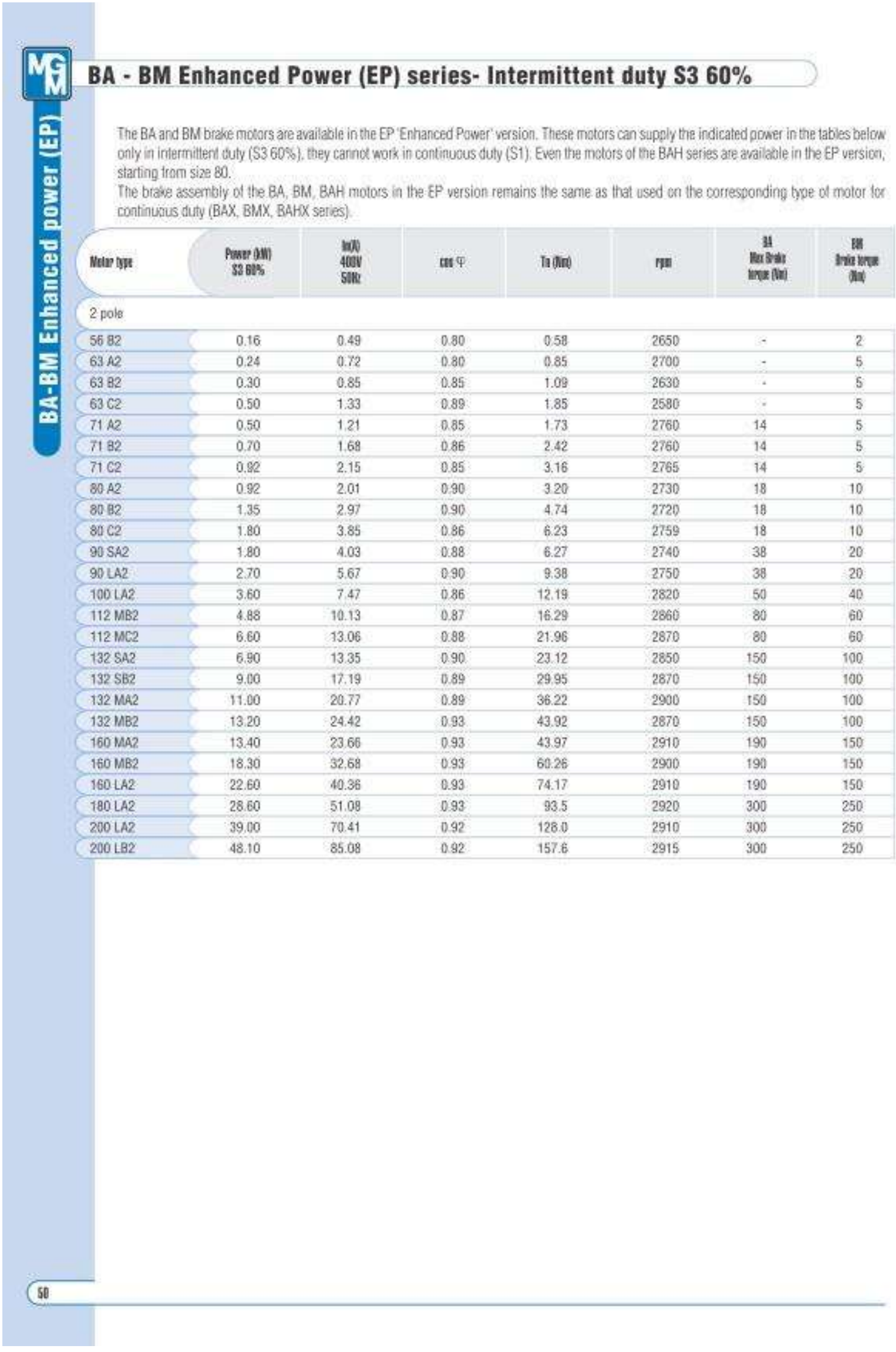
3 MOTOR DATA SHEETS AND LOAD LIST

3.1 ELECTRICAL LOAD LIST

FEEDING LINE	Load	Rated Power [kW]	cos φ	Load Type	Utilization factor (ku)	Utilized power [kW] (kW*ku)
400Vac / 50 Hz / 3 Phases + neutral	Hoisting motor	14,0	0,84	S3 60%	0,8	11,20
	Rotation motor	3,90	0,86	S3 60%	0,5	1,80
	Trolley motor	1,45	0,84	S3 60%	0,5	0,73
	auxiliaries	1,50	0,95		0,7	1,05
	Total	20,85				14,78

Table 2 - Electrical Load List

3.2 MOTORS DATA SHEET



BA-BM Enhanced power (EP)

BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

The BA and BM brake motors are available in the EP 'Enhanced Power' version. These motors can supply the indicated power in the tables below only in intermittent duty (S3 60%), they cannot work in continuous duty (S1). Even the motors of the BAH series are available in the EP version, starting from size 80.
The brake assembly of the BA, BM, BAH motors in the EP version remains the same as that used on the corresponding type of motor for continuous duty (BAX, BMX, BAHX series).

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Ta (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
2 pole							
56 B2	0.16	0.49	0.80	0.58	2650	-	2
63 A2	0.24	0.72	0.80	0.85	2700	-	5
63 B2	0.30	0.85	0.85	1.09	2630	-	5
63 C2	0.50	1.33	0.89	1.85	2580	-	5
71 A2	0.50	1.21	0.85	1.73	2760	14	5
71 B2	0.70	1.68	0.86	2.42	2760	14	5
71 C2	0.92	2.15	0.85	3.16	2765	14	5
80 A2	0.92	2.01	0.90	3.20	2730	18	10
80 B2	1.35	2.97	0.90	4.74	2720	18	10
80 C2	1.80	3.85	0.86	6.23	2759	18	10
90 SA2	1.80	4.03	0.88	6.27	2740	38	20
90 LA2	2.70	5.67	0.90	9.38	2750	38	20
100 LA2	3.60	7.47	0.86	12.19	2820	50	40
112 MB2	4.88	10.13	0.87	16.29	2860	80	60
112 MC2	6.60	13.06	0.88	21.96	2870	80	60
132 SA2	6.90	13.35	0.90	23.12	2850	150	100
132 SB2	9.00	17.19	0.89	29.95	2870	150	100
132 MA2	11.00	20.77	0.89	36.22	2900	150	100
132 MB2	13.20	24.42	0.93	43.92	2870	150	100
160 MA2	13.40	23.66	0.93	43.97	2910	190	150
160 MB2	18.30	32.68	0.93	60.26	2900	190	150
160 LA2	22.60	40.36	0.93	74.17	2910	190	150
180 LA2	28.60	51.08	0.93	93.5	2920	300	250
200 LA2	39.00	70.41	0.92	128.0	2910	300	250
200 LB2	48.10	85.08	0.92	157.6	2915	300	250

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BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Tn (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
4 pole							
63 A4	0.15	0.60	0.80	1.30	1100	-	5
63 B4	0.23	0.78	0.73	1.65	1300	-	5
63 C4	0.26	0.81	0.89	1.92	1310	-	5
63 D4	0.37	1.24	0.85	2.96	1180	-	5
71 A4	0.33	0.94	0.81	2.33	1330	14	5
71 B4	0.5	1.37	0.79	3.48	1320	14	5
71 C4	0.7	1.97	0.82	5.29	1290	14	5
71 D4	0.8	2.22	0.80	5.86	1325	14	5
80 A4	0.7	1.96	0.80	5.13	1330	18	10
80 B4	0.98	2.55	0.79	6.97	1335	18	10
80 C4	1.20	3.04	0.78	8.37	1365	18	10
80 D4	1.30	3.50	0.73	9.09	1365	18	10
90 SA4	1.45	3.33	0.84	10.22	1355	38	20
90 LA4	1.95	4.43	0.86	13.90	1340	38	20
90 LB4	2.30	5.27	0.83	16.15	1360	38	20
90 LC4	2.70	6.34	0.82	19.10	1350	38	20
100 LA4	2.90	6.29	0.86	20.21	1370	50	40
100 LB4	3.90	8.30	0.86	26.99	1380	50	40
112 MB4	4.80	9.96	0.86	32.86	1395	80	60
112 MC4	6.60	13.68	0.85	45.02	1400	80	60
132 SB4	7.10	14.54	0.85	48.09	1410	150	100
132 MA4	9.80	19.60	0.86	66.61	1405	150	100
132 MB4	12.0	23.73	0.87	81.27	1410	150	100
132 MC4	14.0	28.34	0.84	94.15	1420	150	100
160 MA4	12.0	24.29	0.84	79.30	1445	190	150
160 MB4	14.0	27.68	0.85	93.2	1435	190	150
160 LA4	19.5	38.11	0.85	129.8	1435	190	150
180 LA4	24.0	46.89	0.86	158.6	1445	300	250
180 LB4	28.6	55.89	0.85	189.0	1445	300	250
200 LB4	39.0	74.47	0.86	259.5	1435	300	250
225 S4	48.1	88.82	0.86	313.5	1465	600	400
225 M4	58.5	108.0	0.87	381.3	1465	600	400
250 M4	70.4	122.9	0.89	455.8	1475	700	-
280 S4	97.5	176.2	0.86	628.3	1482	1000	-
280 M4	117.0	216.0	0.86	754.9	1480	1000	-

1. Motor characteristic values reported in the tables refer to intermittent duty (S3 60%), voltage 3~400V 50 Hz, ambient temperature max. 40 °C, altitude up to 1000 m. above sea level operating condition. These motors are not included in the scope of the regulation (EU) 2019/1781 a then and they are exempt from efficiency requirements of the regulation.
2. MGM keeps the data provided as up-to-date and correct as possible. Since the products are subject to changes and improvements the data indicated can not be considered binding. The data indicated must also be understood as being general in nature. For specific applications, please contact the MGM staff.
3. For BA Enhanced Power (EP) motors the maximum brake torque values indicated on the chart refer to AC brake; DC brake on BA series is available on request only.
4. The maximum brake torque for BAK 132 motors series is 120 Nm.

BA-BM Enhanced power (EP)

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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 99-00 & process: MC & discipline : M

Mechanical	99-00 Crane						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
X-99001	Lifting Davit	ONSHORE	C10002362	CZX01M	100	2025-02-17	RFC 1

ITEM	Tag	X-99001	: Lifting Davit			Dwg	123A90-DDL-EL-DL-20100
	S/Sys	99-00	: Crane			Module	UD
TASK	code	C10002362		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.	OK
2	Check that the holding down arrangements are correct.	OK
3	Check for all interface piping/mechanical reinstated on site by contractor.	OK
4	Check that the package Mechanical equipment is complete and not damaged.	OK
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.	PL
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:

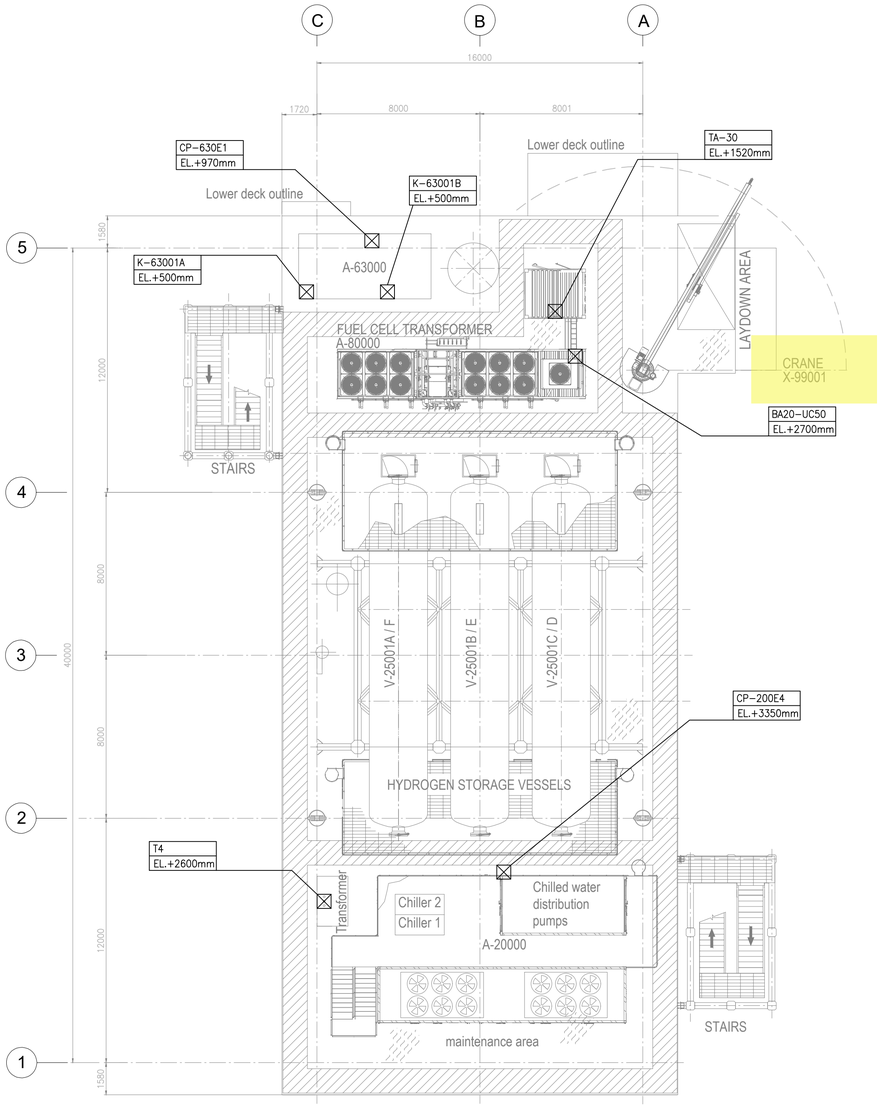
Service report issued by Remazel operator attached.
FAT positive as for report RN-1010-RMZ-04. No PL from fabrication.

The bolts were replaced and tightened on 27-28/03/25.

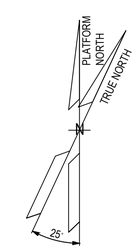
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	REMAZEL	RM (ROSETTI MARINO)	
Name	Abobului Marius	Kangi Albonetti	
Date	2025-02-05	2025-02-17	
Signature	PROVERLIS Digitaly signed by Abobului Marius 2025-02-05T15:45:52.294Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-17T12:08:39.946Z	

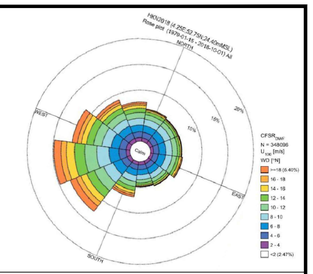
DRAWING NO. 123A90-DDL-EL-DL-20100

REV. 01



PLAN ON TOP DECK
EL+30.310 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. UNLESS NOTED OTHERWISE.
4. AFTER INTERFACE PANEL/BATTERY LIMIT CABLES WILL BE ROUTED INSIDE VENDOR CABLETRAYS

LEGEND

⊠	INTERFACE PANEL/BATTERY LIMIT
JB-200E2	TAG ITEM
EL.+500mm	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-20140	ELECTRICAL HEAT TRACING JUNCTION BOX LAYOUT
123A90-DDL-EL-DL-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	22/07/24	SPS	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)
ELECTRICAL EQUIPMENT LAYOUT
TOP 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 22/07/24

A1	DRAWING NO. 123A90-DDL-EL-DL-20100	SHEET 001	REV. 01

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DL-20100**

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

ROSETTI MARINO SpA

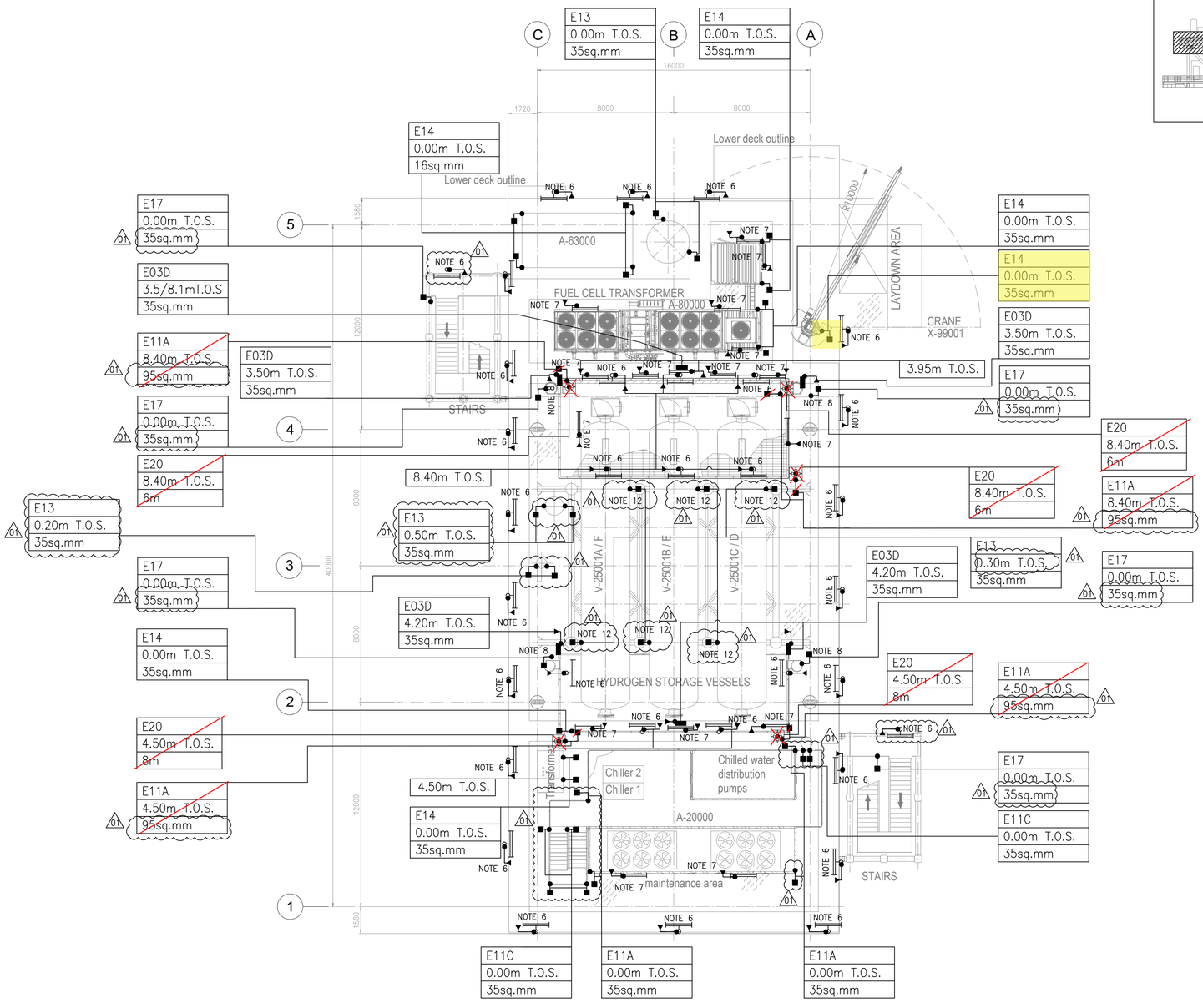
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DRAWING NO. 123A90-DDL-EL-DL-20132

REV. 01

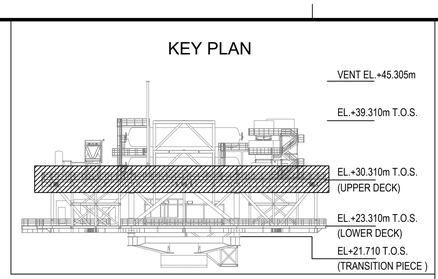
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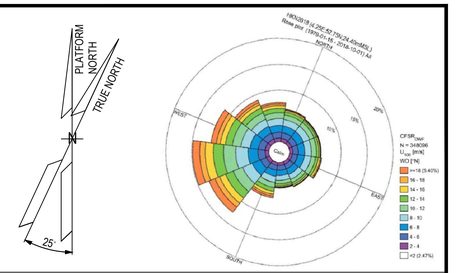
REV. 01_B: Sheet 1, 3



PLAN ON TOP DECK
EL+30.310 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. LADDER MUST BE EARTHED IF NOT WELDED TO THE STRUCTURE. LADDER MUST BE EARTHED TO THE UPPER BEAM OF THE STRUCTURE, COMPLETE EARTHING INCLUDING WITH 2 THREADED STUDS AS PER TYPICAL E17D.
9. ALL EARTH BAR WILL BE EARTHED AS PER TYPICAL E03D.
10. ALL POLE MOUNTED EQUIPMENTS WILL BE EARTHED AS PER TYPICAL E05.
11. EQUIPOTENTIAL BONDING GROUPING FOR BOLTED HANDRAILS ARE PROVIDED EVERY 3M FOR THE ENTIRE PERIMETER AS TYPICAL E16 AND WILL BE DEFINED DURING ASSEMBLY PHASE
12. EARTHED VESSELS V-25001D/E/F. FOR EARTHING V-25001A/B/C SEE SHEET 2 01

LEGEND

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

TYP.	TYPICAL
ELE	ELEVATION
SIZE	

E20	AIR TERMINATION ROD NO.
ELE	ELEVATION
HEIGHT	

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-EL-DL-20100	ELECTRICAL EQUIPMENT LAYOUT - TOP 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-20118	LIGHTING & SOCKET LAYOUT - TOP DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	31/07/24	SAM	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	27/05/24	NLK	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN NLK	CHECKED FMA/AMA	APPROVED FPA/DLO	DATE 31/07/24
A1	DRAWING NO. 123A90-DDL-EL-DL-20132	SHEET 001	REV. 01

VALID FOR CONSTRUCTION

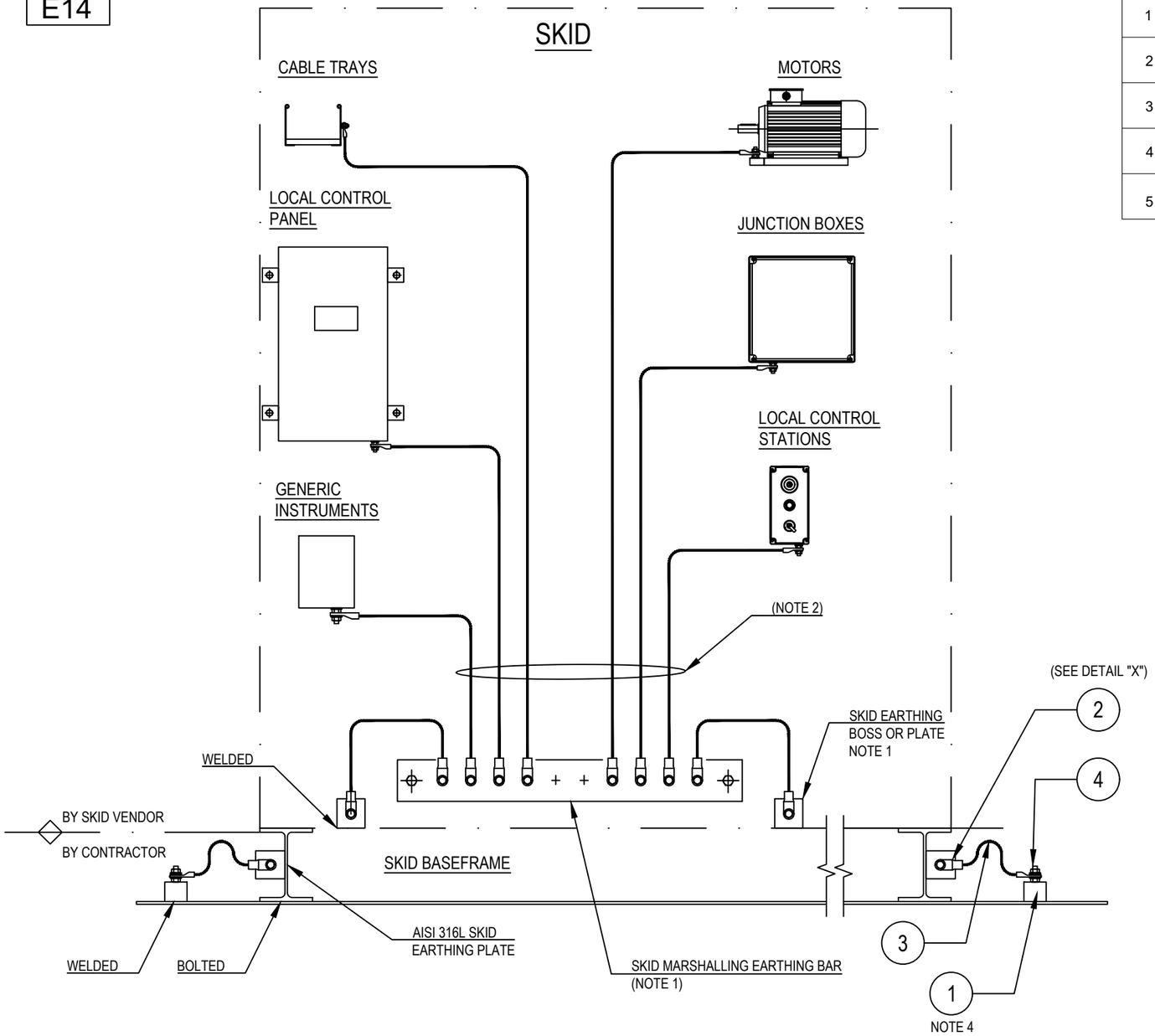
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1_B	08/11/24	V.Ramponi

ROSETTI MARINO SpA

SHEET 001 OF 002

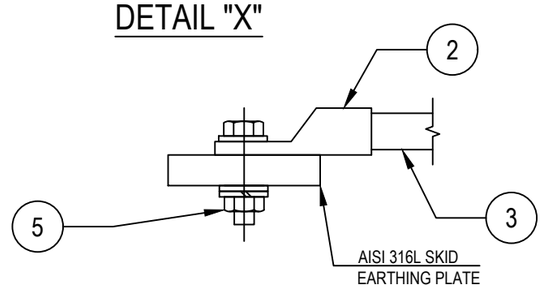
File Name : 123A90-DDL-EL-DL-20132

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 HEXACONAL 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

CROSSWIND

ROSETTI MARINO

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)

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

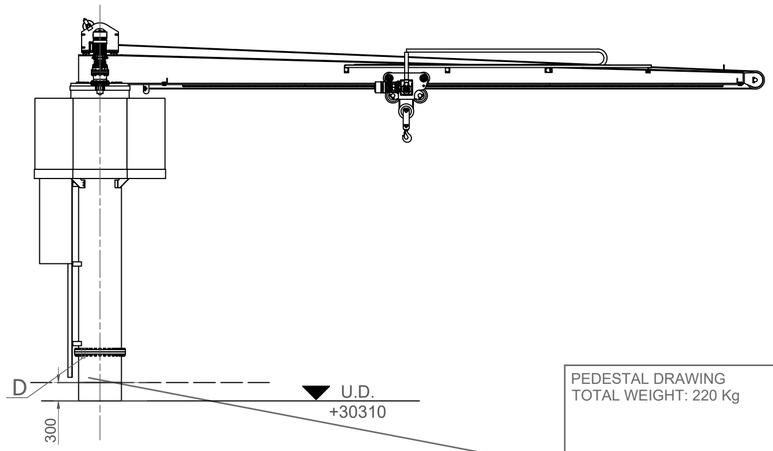
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 014 | REV. 02

F.to UNI A3: 420mmx297mm

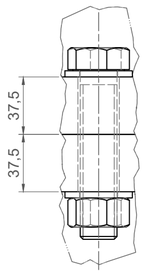
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DRAWING NO. 1724001010-MAC-DA-00010

REV. 1

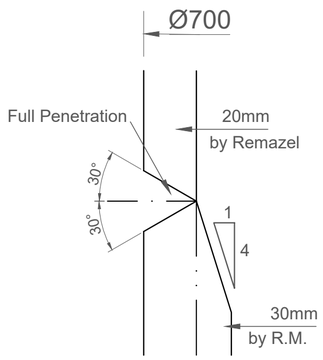


Dett. / Detail **"D"**
(1 : 2)

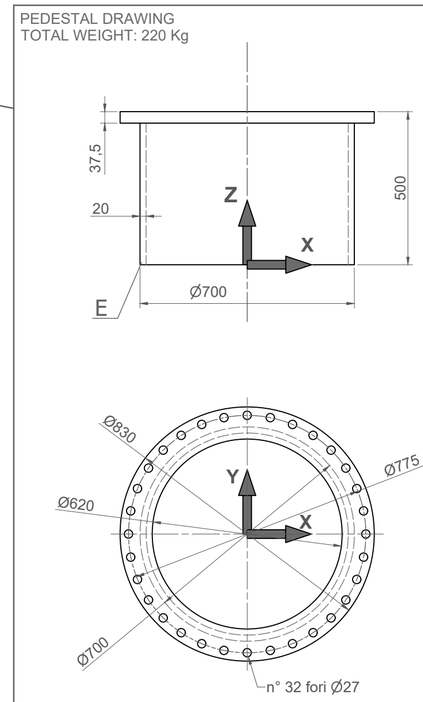


-n° 32 screws M24 - class 10.9

Dett. / Detail **"E"**



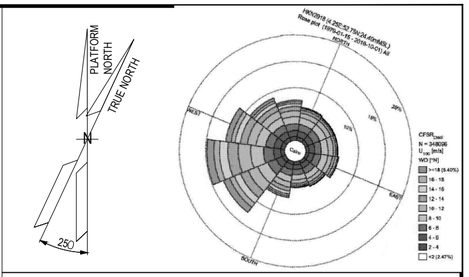
PEDESTAL DRAWING
TOTAL WEIGHT: 220 Kg



Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)



NOTES

LEGEND

HOLDS

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e-mail : info@remazel.com / website : www.remazel.com

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

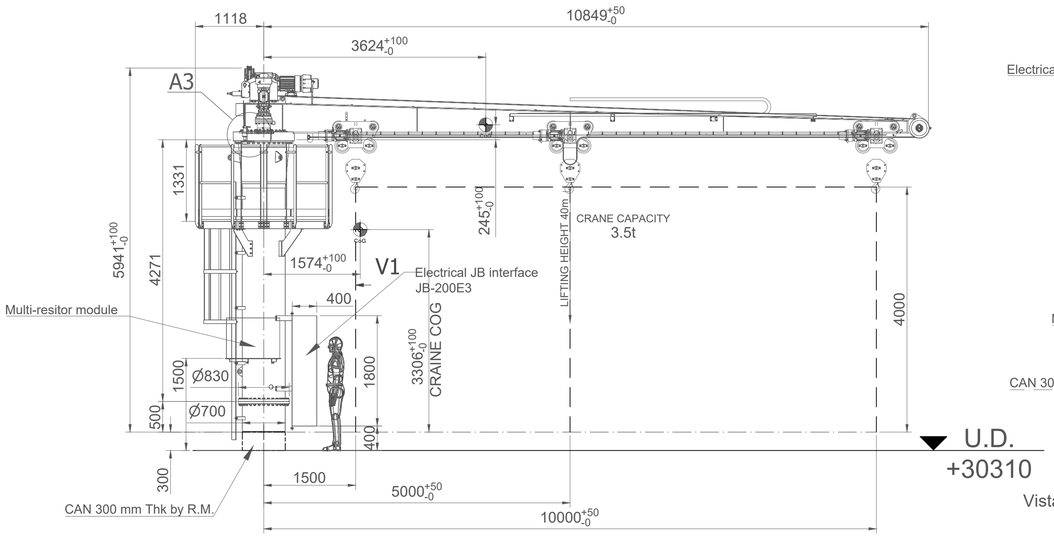
ROSETTI MARINO

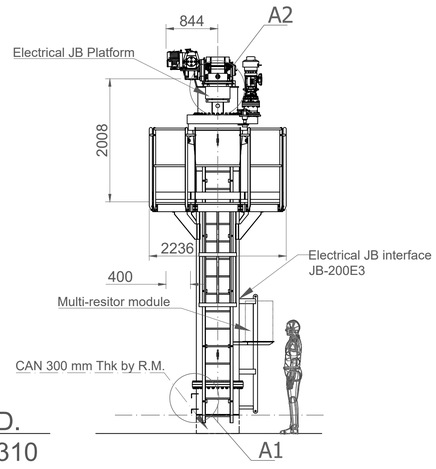
TITLE : 123A90A – Base Load Power Hub Platform
PEDESTAL ADAPTOR CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE 18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00010	SHEET 001	REV. 1

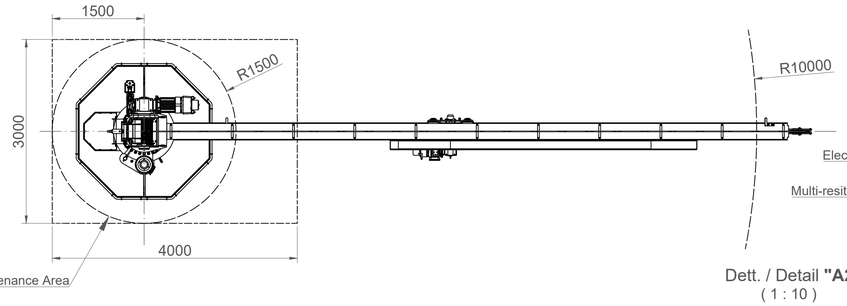
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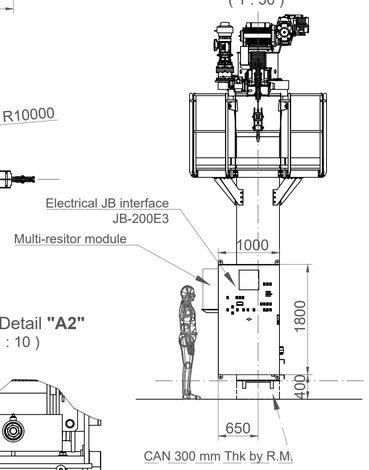
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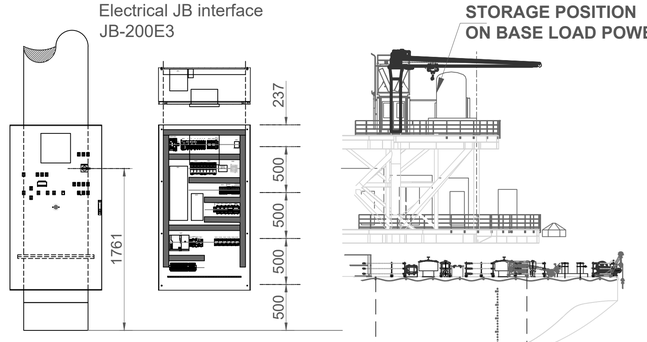




Vista da / View from **"V1"**
(1 : 50)

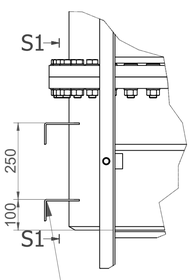






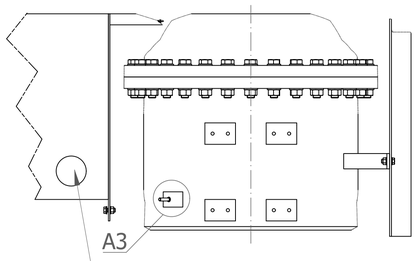
STORAGE POSITION
ON BASE LOAD POWER HUB

Dett. / Detail **"A1"**
(1 : 10)



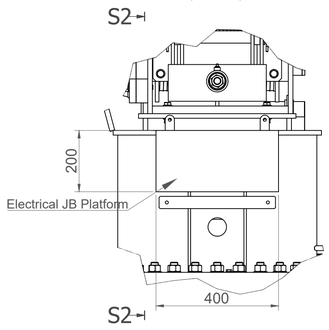
WELDED "L" PROFILE
For supports cable ladder

Sez. / Sec. **"S1-S1"**
(1 : 10)

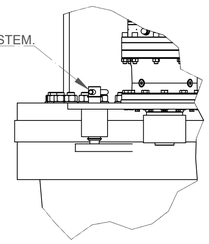


EL. CABLE IN DN32
For cable by R.M.

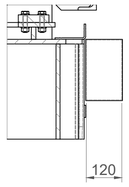
Dett. / Detail **"A2"**
(1 : 10)



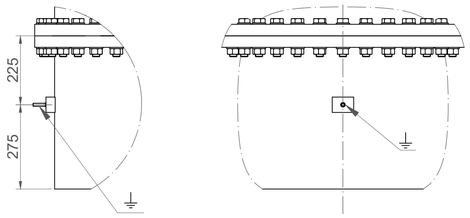
Dett. / Detail **"A3"**
(1 : 10)



Sez. / Sec. **"S2-S2"**
(1 : 10)



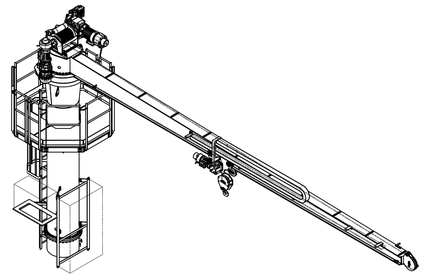
Dett. / Detail **"A3"**
(1 : 10)



EARTING POINT
Threaded stud, Ø16mm, L.30mm, material S355J2+N

Material :
S355 J2+N

Painting Color :
RAL Code: 7038.



EL.	Description Eng	MATERIAL	Q.TY	WEIGHT
3	Travelling Trolley Assembly	S 355 J2+N UNI EN 10025	1	256,01 kg
2	Boom Assembly	S 355 J2+N UNI EN 10025	1	2542,26 kg
1	Fixed Column Ass.	S 355 J2+N UNI EN 10025	1	1241 kg

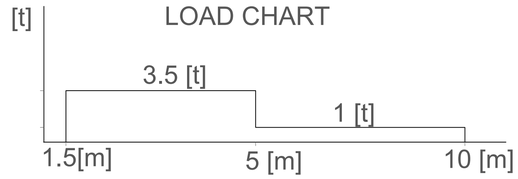
Load at deck interface

MAX FORCE ON DECK	
F_{Vmax}	-120[kN]
F_{Rmax}	15[kN]
M_{Zmax}	±45[kNm]
M_{Rmax}	520[kNm]

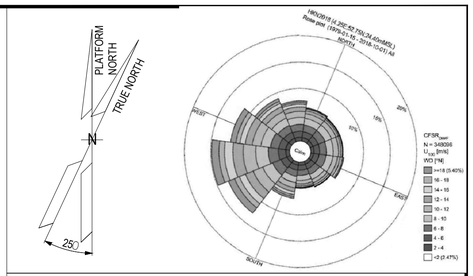
Forces on the table are calculated with 3.5[t]x5[m] outreach.
Forces to be applied at deck level in center of adapter.
DAF= 1.7 (Outboard Lift in Offshore)
Contingency Factor=1.05 (included)
F_{Vmax}: vertical load on deck.
F_{Rmax}: max radial load on deck in any direction (plane x-y)
M_{Zmax}: max Torsion moment in z direction.
M_{Rmax}: max tilting moment (perp. to the boom line)

Test load:

5.6[t]x5[m] - 1.6[t]x10[m]
in according to DNV-ST-0378 rules



Description	Q.ty	Notes
CRANE TYPE		PLATFORM CRANE OFF-SHORE
LIFTING CAPACITY	3.5[t] 1.5-5[m] 1[t] 1.5-10[m]	STEEL ROPE HOIST WINCH
HOOK STROKE	40[m]	Electric driven by gearbox Brake on the El. Motor
LIFTING SPEED	3.75/15[m/min]	Variable speed motor
Hoist winch stroke (radial movement)	1.5-10[m]	Eletric driven rack - pinion system
RADIAL SPEED	2-8[m/min]	
PRELIMINARY WEIGHT	6000[kg]	
ROTATIONAL MOVEMENT	0-180°	By electric Motor Geqarbox Pinion on slewing bearing
ROTATIONAL SPEED	0.25/0.5[rpm]	Variable speed motor
WORKING TEMPERATURE	-9/45[°C]	
HAZAEDOUS AREA:		SAFE AREA
PERSONEL LIFT		NO
POWER SUPPLY	400[v]/3Ph/50[hZ] (3Ph+N)	
TOTAL POWER ABS.	20[kW]	



NOTES

LEGEND

HOLDS

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e-mail: info@remazel.com / website: www.remazel.com

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
4	05/11/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
3	20/09/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
2	21/08/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
1	03/07/24	R.S.	M.P.	A.T.	ACCEPTED FOR CONSTRUCTION
0	18/06/24	R.S.	M.P.	A.T.	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : 123A90A – Base Load Power Hub Platform
CRANE GENERAL ARRANGEMENT DRAWINGS
DAVIT CRANE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1:50
DRAWN R.S.	CHECKED M.P.	APPROVED A.T.	DATE	18/06/24
A1	DRAWING NO. 1724001010-MAC-DA-00009		SHEET 001	REV. 4

File Name : 1724001010-MAC-DA-00009

Base Load Power Hub (BLPH)

DAVIT CRANE
MOTOR DATA SHEETS AND LOAD LIST

Document Number: 1724001010-MAC-DS-00013

Document Class: 3

03	11/09/2024	Issue for Information (IFI)	MP	GB	AT
02	28/08/2024	Issue for Information (IFI)	MP	GB	AT
01	02/08/2024	Issue for Information (IFI)	MP	GB	AT
00	15/07/2024	Issue for Information (IFI)	GB	MP	AT
Rev.	Date	Description	Prepared	Reviewed	Approved

REMAZEL ENGINEERING

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Revision / Change Log

Rev.	Description
00	Issue for Information (IFI)
01	Issue for Information (IFI)
02	Issue for Information (IFI)
03	Issue for Information (IFI)

HOLDS LIST

No.	Description
1	
2	
3	
4	

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1.1.2 Project Concept 6

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3.1 ELECTRICAL LOAD LIST 9

3.2 MOTORS DATA SHEET 10

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Figure 3 – BLPH Concept 6

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List of Attachments

None

Electricity in the BLPH will be stored in the form of electrons in a battery energy storage system (BESS) as well as converted into green hydrogen via water electrolysis. When the power output from the connecting wind turbine drops to below 1 MWe, the BLPH will return its stored energy to supplement the remaining power output. This will be by discharging the BESS, while stored hydrogen will be converted back into electricity using a fuel cell to extend the discharge duration.

The purpose of the BLPH s to function as a testbed for the integration of energy storage technologies with renewable generation. It is expected that equipment installed on the BLPH will operate as Normally Unmanned Installation for at least two (2) years with no or minimal maintenance and it will have its own independent control room with the ability to communicate with Crosswind's control room.

2 DOCUMENT SCOPE

Motor data sheets and load supply

2.1 DEFINITIONS AND ABBREVIATIONS

COMPANY or Client (CPY):	Crosswind
CONTRACTOR (CTR):	ROSETTI MARINO S.p.A.
PROJECT:	HOLLANDSE KUST NOORD WIND PARK Project

Table 1 - Definitions and Abbreviations

3 MOTOR DATA SHEETS AND LOAD LIST

3.1 ELECTRICAL LOAD LIST

FEEDING LINE	Load	Rated Power [kW]	cos φ	Load Type	Utilization factor (ku)	Utilized power [kW] (kW*ku)
400Vac / 50 Hz / 3 Phases + neutral	Hoisting motor	14,0	0,84	S3 60%	0,8	11,20
	Rotation motor	3,90	0,86	S3 60%	0,5	1,80
	Trolley motor	1,45	0,84	S3 60%	0,5	0,73
	auxiliaries	1,50	0,95		0,7	1,05
	Total	20,85				14,78

Table 2 - Electrical Load List

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3.2 MOTORS DATA SHEET

BA-BM Enhanced power (EP)

BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

The BA and BM brake motors are available in the EP 'Enhanced Power' version. These motors can supply the indicated power in the tables below only in intermittent duty (S3 60%), they cannot work in continuous duty (S1). Even the motors of the BAH series are available in the EP version, starting from size 80.
The brake assembly of the BA, BM, BAH motors in the EP version remains the same as that used on the corresponding type of motor for continuous duty (BAX, BMX, BAHX series).

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Ta (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
2 pole							
56 B2	0.16	0.49	0.80	0.58	2650	-	2
63 A2	0.24	0.72	0.80	0.85	2700	-	5
63 B2	0.30	0.85	0.85	1.09	2630	-	5
63 C2	0.50	1.33	0.89	1.85	2580	-	5
71 A2	0.50	1.21	0.85	1.73	2760	14	5
71 B2	0.70	1.68	0.86	2.42	2760	14	5
71 C2	0.92	2.15	0.85	3.16	2765	14	5
80 A2	0.92	2.01	0.90	3.20	2730	18	10
80 B2	1.35	2.97	0.90	4.74	2720	18	10
80 C2	1.80	3.85	0.86	6.23	2759	18	10
90 SA2	1.80	4.03	0.88	6.27	2740	38	20
90 LA2	2.70	5.67	0.90	9.38	2750	38	20
100 LA2	3.60	7.47	0.86	12.19	2820	50	40
112 MB2	4.88	10.13	0.87	16.29	2860	80	60
112 MC2	6.60	13.06	0.88	21.96	2870	80	60
132 SA2	6.90	13.35	0.90	23.12	2850	150	100
132 SB2	9.00	17.19	0.89	29.95	2870	150	100
132 MA2	11.00	20.77	0.89	36.22	2900	150	100
132 MB2	13.20	24.42	0.93	43.92	2870	150	100
160 MA2	13.40	23.66	0.93	43.97	2910	190	150
160 MB2	18.30	32.68	0.93	60.26	2900	190	150
160 LA2	22.60	40.36	0.93	74.17	2910	190	150
180 LA2	28.60	51.08	0.93	93.5	2920	300	250
200 LA2	39.00	70.41	0.92	128.0	2910	300	250
200 LB2	48.10	85.08	0.92	157.6	2915	300	250

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BA - BM Enhanced Power (EP) series- Intermittent duty S3 60%

BA-BM Enhanced power (EP)

Motor type	Power (kW) S3 60%	In(A) 400V 50Hz	cos φ	Tn (Nm)	rpm	BA Max Brake torque (Nm)	BM Brake torque (Nm)
4 pole							
63 A4	0.15	0.60	0.80	1.30	1100	-	5
63 B4	0.23	0.78	0.73	1.65	1300	-	5
63 C4	0.26	0.81	0.89	1.92	1310	-	5
63 D4	0.37	1.24	0.85	2.96	1180	-	5
71 A4	0.33	0.94	0.81	2.33	1330	14	5
71 B4	0.5	1.37	0.79	3.48	1320	14	5
71 C4	0.7	1.97	0.82	5.29	1290	14	5
71 D4	0.8	2.22	0.80	5.86	1325	14	5
80 A4	0.7	1.96	0.80	5.13	1330	18	10
80 B4	0.98	2.55	0.79	6.97	1335	18	10
80 C4	1.20	3.04	0.78	8.37	1365	18	10
80 D4	1.30	3.50	0.73	9.09	1365	18	10
90 SA4	1.45	3.33	0.84	10.22	1355	38	20
90 LA4	1.95	4.43	0.86	13.90	1340	38	20
90 LB4	2.30	5.27	0.83	16.15	1360	38	20
90 LC4	2.70	6.34	0.82	19.10	1350	38	20
100 LA4	2.90	6.29	0.86	20.21	1370	50	40
100 LB4	3.90	8.30	0.86	26.99	1380	50	40
112 MB4	4.80	9.96	0.86	32.86	1395	80	60
112 MC4	6.60	13.68	0.85	45.02	1400	80	60
132 SB4	7.10	14.54	0.85	48.09	1410	150	100
132 MA4	9.80	19.60	0.86	66.61	1405	150	100
132 MB4	12.0	23.73	0.87	81.27	1410	150	100
132 MC4	14.0	28.34	0.84	94.15	1420	150	100
160 MA4	12.0	24.29	0.84	79.30	1445	190	150
160 MB4	14.0	27.68	0.85	93.2	1435	190	150
160 LA4	19.5	38.11	0.85	129.8	1435	190	150
180 LA4	24.0	46.89	0.86	158.6	1445	300	250
180 LB4	28.6	55.89	0.85	189.0	1445	300	250
200 LB4	39.0	74.47	0.86	259.5	1435	300	250
225 S4	48.1	88.82	0.86	313.5	1465	600	400
225 M4	58.5	108.0	0.87	381.3	1465	600	400
250 M4	70.4	122.9	0.89	455.8	1475	700	-
280 S4	97.5	176.2	0.86	628.3	1482	1000	-
280 M4	117.0	216.0	0.86	754.9	1480	1000	-

1. Motor characteristic values reported in the tables refer to intermittent duty (S3 60%), voltage 3~400V 50 Hz, ambient temperature max. 40 °C, altitude up to 1000 m above sea level operating conditions. These motors are not included in the scope of the regulation (EU) 2019/1781 s then and they are exempt from efficiency requirements of the regulation.
2. MGM keeps the data provided as up-to-date and correct as possible. Since the products are subject to changes and improvements, the data indicated cannot be considered binding. The data indicated must also be understood as being general in nature. For specific applications, please contact the MGM staff.
3. For BA Enhanced Power (EP) motors the maximum brake torque values indicated on the chart refer to AC brake, DC brake on BA series is available on request only.
4. The maximum brake torque for BAK 132 motors series is 120 Nm.

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Service Report

Job Order	24-27012
Distribution to	Rosetti Marino SPA
Place	Marina di Ravenna
Location	Cantiere Rosetti Marino SPA
Date	04/02/2025 to 06/02/2025
Subject	Davit Crane 3,5t / 1t

Participants for REMAZEL Engineering	
Abobului Ionut Marius	Tecnico

Participants for Client	
Nome e cognome	Mansione/Ruolo

REMAZEL ENGINEERING S.P.A.
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Fully paid capital € 5.000.000,00
VAT 01023830167 | REA MI-1794737
Company subject to the direction and coordination of FINCANTIERI S.p.A.

04 /02/2025: 4 ore viaggio

Viaggio Trieste- Marina di Ravenna

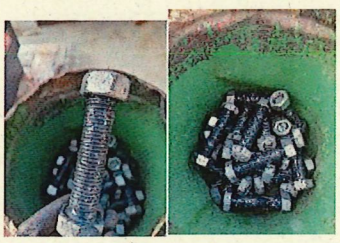
05/02/2025: 8 ore attività

Corso induction cantiere Rosetti Marino SPA

Arrivato sulla piattaforma ho riscontrato il problema dei bulloni M24x110 HDG che collegano la torre gru alla piattaforma (V. Foto 1). La ditta ha eseguito il serraggio dei suddetti bulloni, che sono stati ingrassati con Molycote, per mezzo di chiave meccanica e tirando a 954Nm seguendo la tabella di serraggio (v. Foto n. 2). La procedura ha spezzato un bullone. Abbiamo quindi provveduto a svitare tutti i bulloni e come si vede nelle foto 3 e 4 alcuni hanno la filettatura rovinata.

Foto 1 

Foto 2 

Foto 3 e 4 

Vista la situazione i bulloni M24x110 HDG che collegano la base torre gru e alla piattaforma sono stati tutti cambiati con bulloni M24X110 HDG a secco e serrati con chiave meccanica a pre-serraggio 550Nm (v. Foto 5) e serraggio 954Nm (v. Foto 6). Abbiamo mantenuto le vecchie rondelle come si vede nella foto 7.

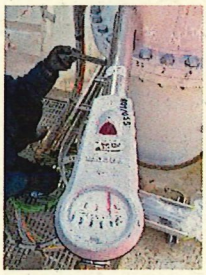
Foto 5 

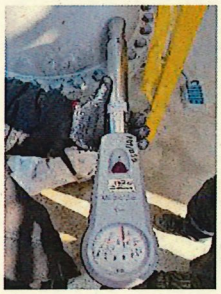
Foto 6 

Foto 7 

In seguito, ho fornito assistenza nel sollevamento della gru per la sistemazione dei cavi di rotazione della gru stessa.

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Come da procedura Remazel il cavo lasciato all' interno della torre fa una curva di 0,5 metri prima di entrare nel tubo fissato internamente (v. Foto 8 – 9 – 10).

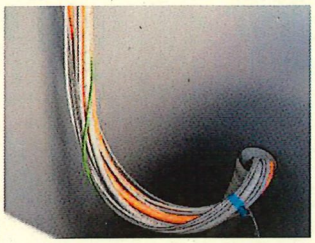
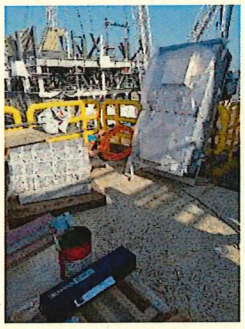
Foto 8 

Foto 9 

Foto 10 

Ho fatto togliere le fascette in quanto non previste dalla procedura Remazel.

La gru non viene collegata e azionata in quanto il quadro elettrico non era ancora installato (v. Foto 11).

Foto 11 

Nota:
Da eseguire il serraggio dei bulloni ralla gru superiore M24x140 HDG che sono già stati ingrassati a serraggio nominale di 750 Nm.

06/02/2025:
4 ore di viaggio

Viaggio Marina di Ravenna - Trieste

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REMAZEL
ENGINEERING

Interested people are kindly requested to examine the content and report eventual inaccuracies, omissions and mistakes.
In absence of feedback, the text shall be considered as approved.

Remazel Engineering	Client
_____	_____
_____	_____
_____	_____
_____	_____

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Fastening Bolts

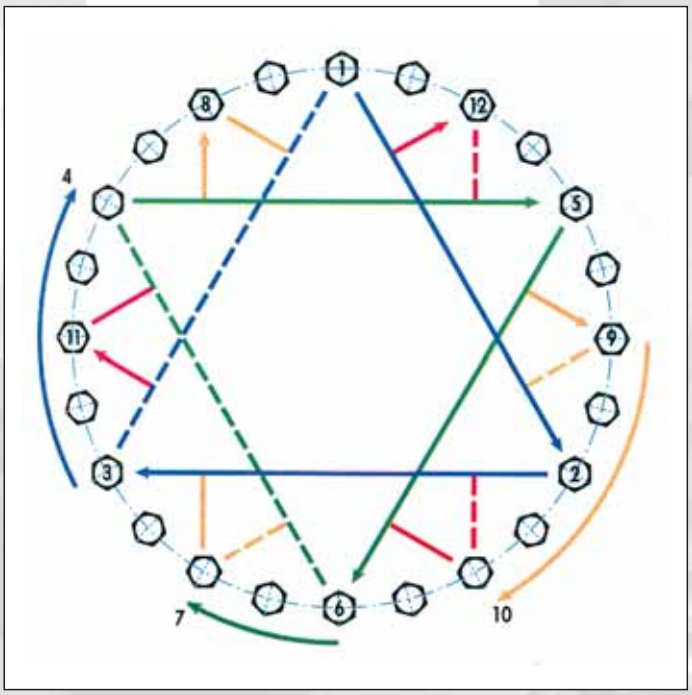
The bolt connection is crucial to the slew bearing functionality and life. Proper fastening of the slew bearing is required by calculation. This calculation determines the quantity, size and quality and preload force of the fastening bolts.
Proper preload is met with:

1. High precision torque wrench
2. Hydraulic tensioning equipment
3. Length measurement on calibrated bolts

The torque is affected by:

1. Bolt quality
2. Grade thread connection friction
3. Friction between the contact surfaces of bolt head, nut and parts themselves

The fastening hole location of the structure must match those of the bearing or distortions will appear.
Excessive distortion results in high friction and reduced bearing life. If friction increases by tightening the bolts, the bearing should be removed and the contact surfaces checked for flatness.
The specified diameters, strength class, quantities and degree of preload must be followed. We recommend a minimum clamping length of 5 x bolt diameter.
The bolts must be carefully tightened crosswise to the specified preload, as shown below.





The following table gives some recommended values for the tightening torques.
The values are based on lightly oiled threads and contact surfaces.(μ_{TOTAL} = 0,14)

Thread diameter mm	Tightening Torques in Nm			
	hydr. torque wrench	mech. torque wrench	hydr. torque wrench	mech. torque wrench
	8.8	**8.8**	**10.9**	**10.9**
M12	87	78	130	117
M16	215	193	310	279
M20	430	387	620	558
M24	740	666	1060	954
M27	1100	990	1550	1395
M30	1500	1350	2100	1890
	Grade 5	**Grade 5**	**Grade 8**	**Grade 8**
UNC 5/8" - 11"	200	180	286	260
UNC 3/4" - 10"	352	320	506	460
UNC 7/8" - 9"	572	520	803	730
UNC 1" - 8"	855	770	1210	1100
UNC 11/8" - 7"	1068	970	1716	1560
UNC 11/4" - 7"	1507	1370	2410	2190

Dry threads require higher tightening torques whereas heavily oiled threads.The variation, particulary on bolts larger than M27 or 1 1/4" is considerable. We recommend to use hydraulic tensioning cylinders for these sizes.

It is necessary to tighten the bolts to the required preload and to ensure this torque value over the lifetime of operation. We recommend to check the torque after 3 months of operation and then once every year.

NOTE

Securing elements such as lock and spring washers may not be used. Only the preloading force of the bolt serves to secure the bolt.

Mounting Procedure

1. Check all required components such as rings, balls, rollers, spacers, or cages consistency as requested on the drawings and parts list;
2. Identify the soft spot "Y" of the slew bearing;
3. Duly clean the rings from dirt and chips from previous operations;
4. Procedure for ball slew bearings and cross roller slew bearings:
   - 4.1 Position the ring with the plug on the assembly devicewith the reference surface oriented downwards;
   - 4.2 Remove the dow locking the plug;
   - 4.3 Remove the plug;
   - 4.4 Position the second ring as shown in the drawing;
   - 4.5 Raise the toothed ring (if both rings are non geared, the ring with no plug) and insert a total of 3 balls at approx 120° one from the other, so that a free rotation is allowed;
   - 4.6 Insert the balls or rollers leaving empty spots as requested by the drawings/parts list;
   - 4.7 Insert the plug and dow it;
5. Three row rollers bearings:
   - 5.1 Position the lower ring;
   - 5.2 Fill the first roller track with rollers and spacers/cage in specified quantities;
   - 5.3 Position the center ring;

Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

NOT APPLICABLE

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-001	SHEET 1 of 11
		Data *Date* 24/10/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Pedestal Crane*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
P1	1	Pedestal Crane	C09-0001-P0001	Visual Check DFT	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN – SDV/BDV AND TIGHT SHUT-OFF XV VALVES	1724001010-QC-ITP-00002	04	AFC
VALVES SURFACE PREPARATION AND PAINTING PROCEDURES	1724001010-MAT-PRO-00007	02	AFC
PEDESTAL CARPENTRY	C09-0001-P0001	D	-

Remarks: None.

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 out 24/10/2024 at SeaMetal Srl factory, located in Via Riva Giovanni da Verrazzano 9 – 34148 Trieste (TS) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 02 Rev.01 of 14-10-2024) and in accordance with ITP (STEP 7.01) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Matteo Biancolillo (SeaMetal)
Carlo Ziber (Remazel Enginering QC Dep.)
Marco Puzzer (Remazel Enginering PM)
Marzio Mederici (behalf for Crosswind)

Area of concern
None

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

PROGETTO *Project*	CLIENTE *Client*	COMMESSA / *Job*	COMMESSA FORNITORE / *Job Vendor*
Base Load Power Hub (BLPH)	CROSSWIND	***123A90***	24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Pedestal Crane*	

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	ESITO / *Result*
As per Inspection Notification follow the activities: • Visual inspection • DFT check Pedestal Crane with only primer coat 150 µm (See vendor coating system as per coating spec. 1724001010-MAT-PRO-00007).	**Satisfactory**

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*
Positector Standard	**Defelsko**	**892160**	**30-08-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	DESCRIZIONE / *Description*	TIPO / *Type*	NR. PAGINE / *No. Pages*
8735/24	Certificate of Calibration	Certificate	2

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

None.

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

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.



Overview Pedestal Crane external sisde

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	INSPECTION REPORT	**Report No**. IR-REM-1010-001	SHEET 4 of 11
		Data *Date 24/10/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Pedestal Crane*	



Overview Pedestal Crane internalsisde

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.





DFT Calibration

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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



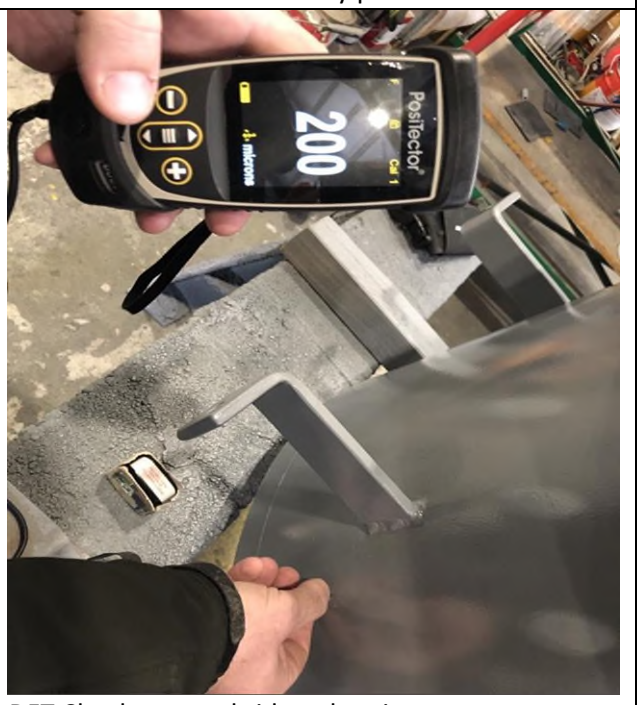
DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



DFT Check internal side only primer



DFT Check internal side only primer



DFT Check internal side only primer

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

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C.F. e P.I. 02436670125

STRUMENTI & SERVIZI
per il sistema qualità

Nr. 86990/A/0001/UK/IT
Sistema di Gestione Qualità Assicontrol
certificato secondo la norma ISO 9001:2015

CERTIFICATO DI TARATURA

N° 8735/24

Destinatario: **SEA METAL S.r.l.**

Oggetto della taratura: **spessimetro**
Metodo: verifica per comparazione con strumento e campioni primari
Utilizzo: misuratore di spessore di rivestimento

Visualizzatore tipo: **Positector Std** Matricola: **892160**

Sonda tipo: **FKS** Matricola: **1022281**

Sonda tipo: / Matricola: **/**

Costruttore: DeFelsko

Procedura utilizzata per la verifica: CP01/1

Data: 30-08-24

Intervallo di verifica: 12 mesi

Esecuzione attività c/o Assicontrol S.r.l.

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili).
Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto.
Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

ASSICONTROL CENTRO TARATURE ISO 9001

Il responsabile di laboratorio: C. Alborghetti firma _____

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Verifica spessimetro per comparazione con strumento e campioni primari
Procedura: CP01/1
Visualizzatore tipo: positector std matricola: **892160** campo di misura: 0 – 13 mm
Sonda tipo: FKS matricola: 1022281 principio di funzionamento: induzione magnetica

Strumento utilizzato per la comparazione: Megacheck Master matricola: 3655
Sonda utilizzata tipo: PFN-52D matricola: 4765
monopolare [x] bipolare [ ]
Principio di funzionamento: induzione magnetica [x] correnti parassite [x]

La catena di riferibilità ha inizio con i seguenti campioni primari Accredia per il confronto indiretto		
Valore	Matricola	N° certificato
vedi certificato	070264	Accredia 230 DIM_001/23
11.9 um	0321934	Accredia 166 23-L0001
48.8 um	1220817	Accredia 166 23-L0001
99.3 um	1222611	Accredia 166 23-L0001
275.7 um	0521017	Accredia 166 23-L0001
732.4 um	1222612	Accredia 166 23-L0001

Base di riferimento utilizzata: acciaio magnetico spessore 2 mm. dimensioni 30 x 70 mm
Zona di misurazione su base e su lamina: centrale
Le misure sono state effettuate nelle seguenti condizioni ambientali:
temperatura 20°C ± 2°C umidità 50% ± 5%

test nr	valore nominale (mm)	valore letto (mm)	errore (mm)	Incertezza di misura < ± (mm)
1	1,00	0,99	-0,01	0,009
2	2,00	2,02	0,02	0,018
3	3,00	3,05	0,05	0,045
4	4,00	3,98	-0,02	0,018
5	5,00	5,05	0,05	0,045
6	6,00	5,93	-0,07	0,063
7	7,00	6,95	-0,05	0,045
8	8,00	8,11	0,11	0,099
9	9,00	9,15	0,15	0,135
10	10,00	9,85	-0,15	0,135
			Scostamento medio dal valore nominale	± 1,16 % v.l.
			Ripetibilità	95 %

Note: misure effettuate dopo aver calibrato lo strumento.

I valori sopraesposti sono relativi al controllo su 5 punti, lo strumento controllato su tutto il campo di misura con l'ausilio di altri campioni ha mostrato scostamenti entro la precisione ammessa dal costruttore.
Norme di riferimento: ISO2178 (metodo a induzione magnetica), ISO2360 (metodo a correnti parassite).

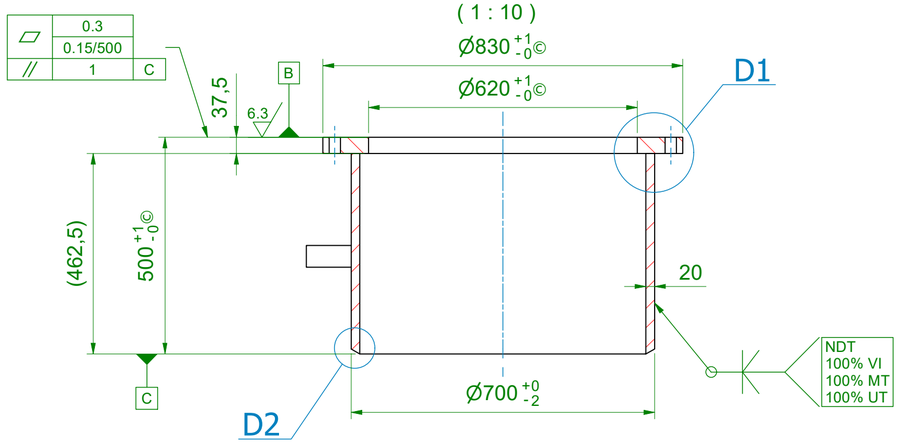
Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.

Data delle prove: 30-08-24 Tecnico di laboratorio

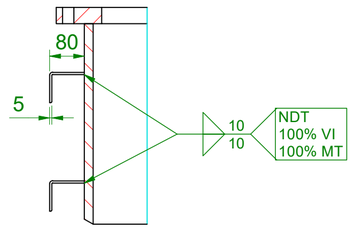
ASSICONTROL Divisione ASSISTENZA e TARATURE

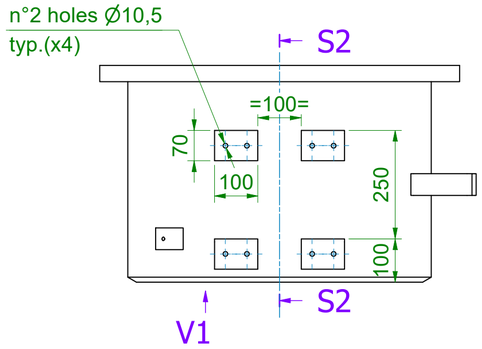
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Sez. / Sec. **"S1-S1"**
(1 : 10)

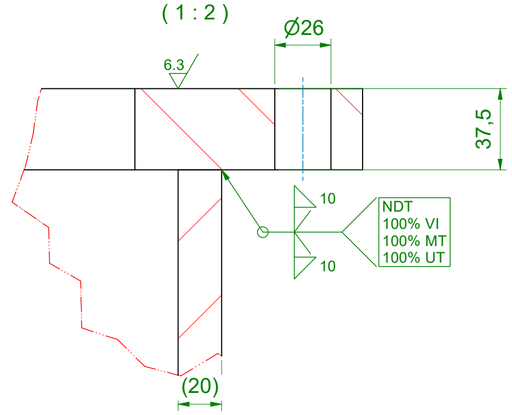


Sez. / Sec. **"S2-S2"**
(1 : 10)

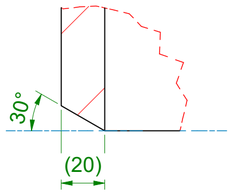




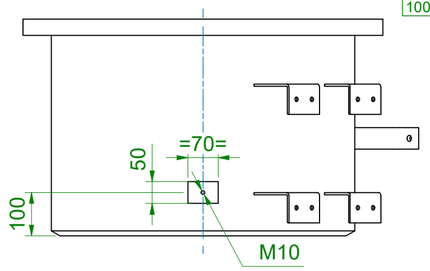
Dett. / Detail **"D1"**
(1 : 2)



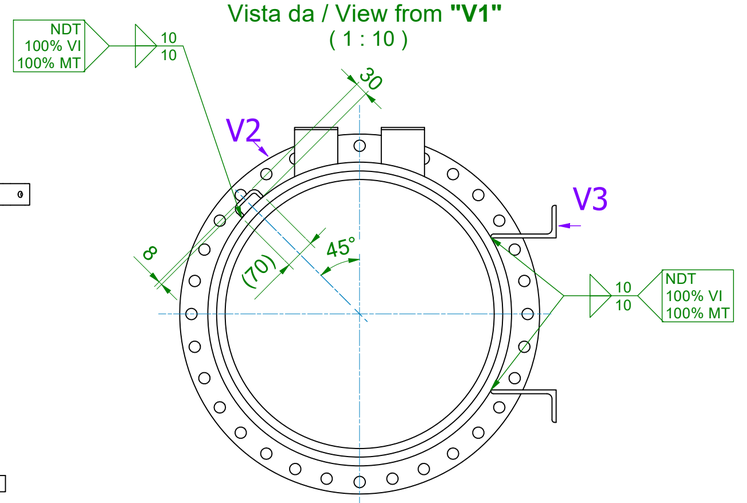
Dett. / Detail **"D2"**
(1 : 2)

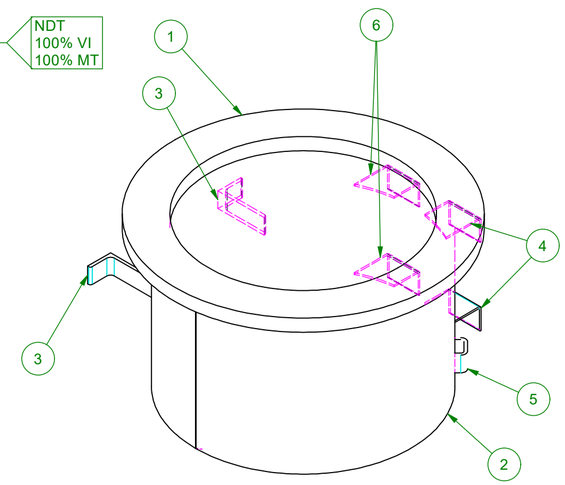


Vista da / View from **"V2"**
(1 : 10)

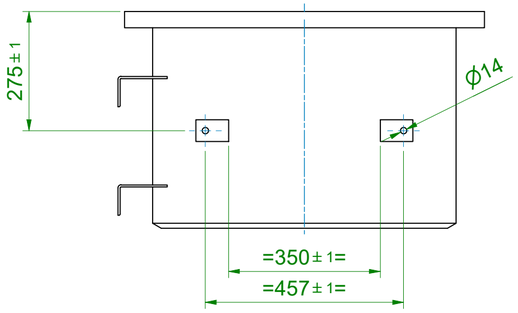


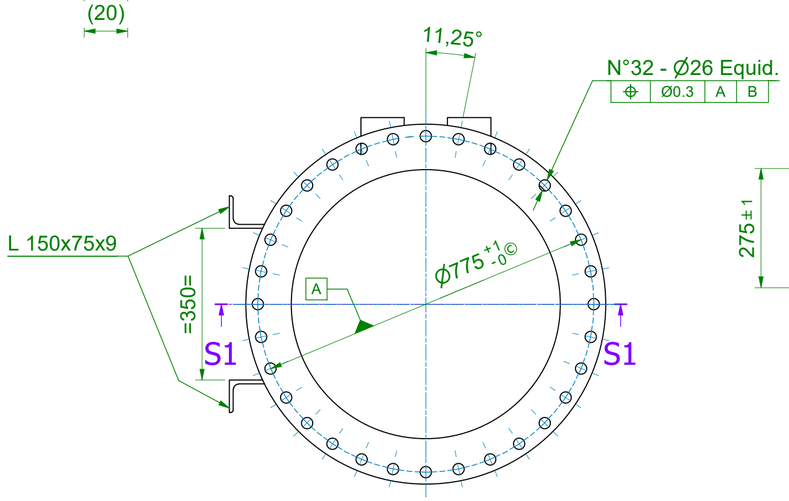
Vista da / View from **"V1"**
(1 : 10)





Vista da / View from **"V3"**
(1 : 10)



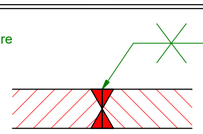


PRIMER ONLY

SALDATURA CONTINUA
CONTINUOUS WELDING

Tutte le saldature testa a testa
non indicate a disegno devono essere
a piena penetrazione

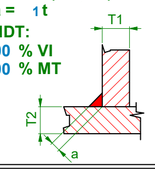
All head to head weldings
not indicated on drawing
must be complete penetration joint



6.3

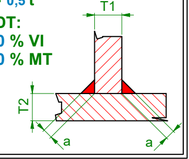
SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION

Su un lato / *One side*
t = min (T1;T2)
a = 1 t
NDT:
100 % VI
100 % MT



SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION

Sui due lati / *Both side*
t = min (T1;T2)
a = 0,5 t
NDT:
100 % VI
100 % MT



UNI EN ISO 8501-3

Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali
Preparation grade of welds, edges and other areas with surface imperfections

Zona *Areas*	Grado *Grade*	R min *Min radius*
Saldature *Weldes*	P3	N.A.
Bordi *Edges*	P3	2 mm
Aree con imperf. superf. *Areas with surface imperf.*	P3	N.A.

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

Simboli saldatura secondo
Welding symbols according to
UNI EN ISO 2553

Eliminare spigoli vivi
Remove all edges

6	Sheet metal	Thk = 5 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,62 kg
5	Sheet metal	Thk = 8 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	0,33 kg
4	Sheet metal	Thk = 5 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,62 kg
3	Sheet metal	L 150x75x9 - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,77 kg
2	Sheet metal	Thk = 20 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	153,36 kg
1	Sheet metal	Thk = 40 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	78,77 kg
EL.	DESCRIPTION	ADDITIONAL DESCRIPTION	Q.TY	WEIGHT

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
D	12/09/2024	Modificato Item 4 / Update item 4	riccardo.sobani	Sobani R.	De Fazio F.	–
B	05/09/2024	Rimozione verniciatura Aggiunte nuove carpenterie/ Delete painting color and Added new Carpentry	riccardo.sobani	Sobani R.	De Fazio F.	–
A	31/07/2024	Prima emissione / First issued	riccardo.sobani			

REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**
Weight : 223.2 kg
Title : Carpenteria Pedestal / Pedestal Carpentry
Scale : 1 : 10
Sheet : 1 of 3 **A2**
Drawing State: **Released** / ***FOR CONSTRUCTION***
Q.C.L. : C1
Drawing N° : C09-0001-P0001
Revision : D

This drawing is property of REMAZEL ENGINEERING S.p.A. It is strictly forbidden to copy, reproduce, modify or distribute the drawing to third persons without owner's written permission.

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-002	SHEET 1 of 13
		Data *Date* 30/10/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object: Boom & Trolley of Davit Crane*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
P2	1	Boom	C09-0001-A0003	Visual Check DFT	**Satisfactory**
P3	1	Trolley of Davit Crane	C09-0001-A0005	Visual Check DFT	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN – SDV/BDV AND TIGHT SHUT-OFF XV VALVES	1724001010-QC-ITP-00002	04	AFC
VALVES SURFACE PREPARATION AND PAINTING PROCEDURES	1724001010-MAT-PRO-00007	02	AFC
BOOM CARPENTRY	C09-0001-P0004	H	-
TRAVELING TROLLEY CARPENTRY	C09-0001-P0006	D	-

Remarks: None.

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 out 29/10/2024 at SeaMetal Srl factory, located in Via Riva Giovanni da Verrazzano 9 – 34148 Trieste (TS) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 04 Rev.01 of 23-10-2024) and in accordance with ITP (STEP 7.03) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Matteo Biancolillo (SeaMetal)
Carlo Ziber (Remazel Enginering QC Dep.)
Marco Puzzer (Remazel Enginering PM)
Marzio Mederici (behalf for Crosswind)

Area of concern
None

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #3544		

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PROGETTO *Project*	CLIENTE *Client*	COMMESSA / *Job*	COMMESSA FORNITORE / *Job Vendor*
Base Load Power Hub (BLPH)	CROSSWIND	***123A90***	24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object: Boom & Trolley of Davit Crane*	

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO /** *Result*
As per Inspection Notification follow the activities: • Visual inspection • DFT check Boom and trolley (See vendor coating system as per coating spec. 1724001010-MAT-PRO-00007). Nominal DFT 360 µm.	**Satisfactory**

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*
Positector Standard	**Defelsko**	**892160**	**30-08-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
8735/24	Certificate of Calibration	Certificate	2

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

None.

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

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Overview Bomm external sisde

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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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Ral Color 7038

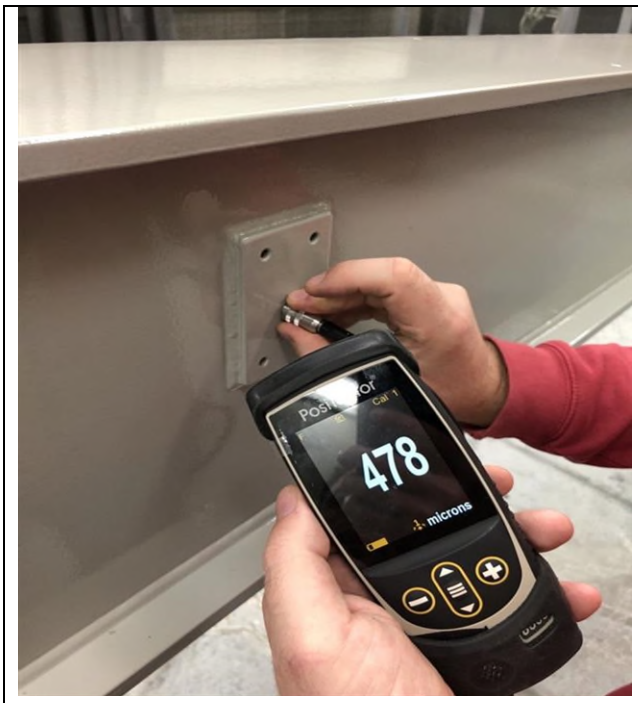
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ROSETTI MARINO SpA Michele Secchi Quality Control Dept. NACE #35424		





DFT Calibration

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



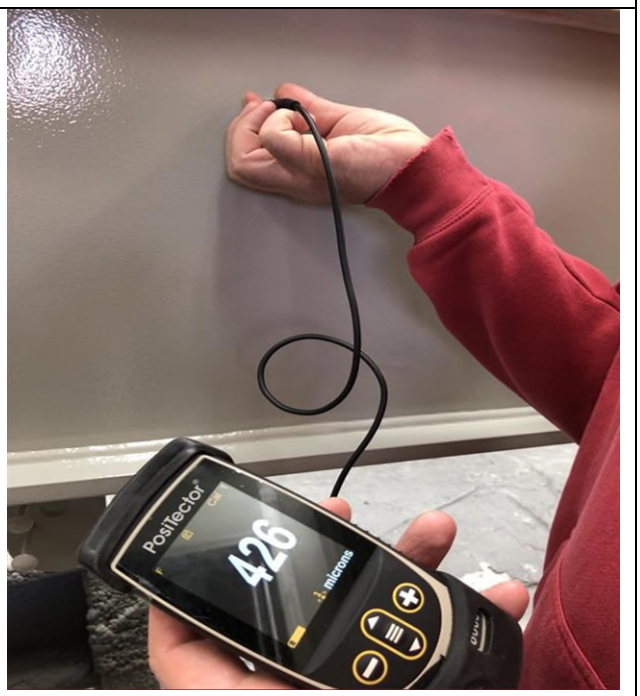
DFT Check external side



DFT Check external side



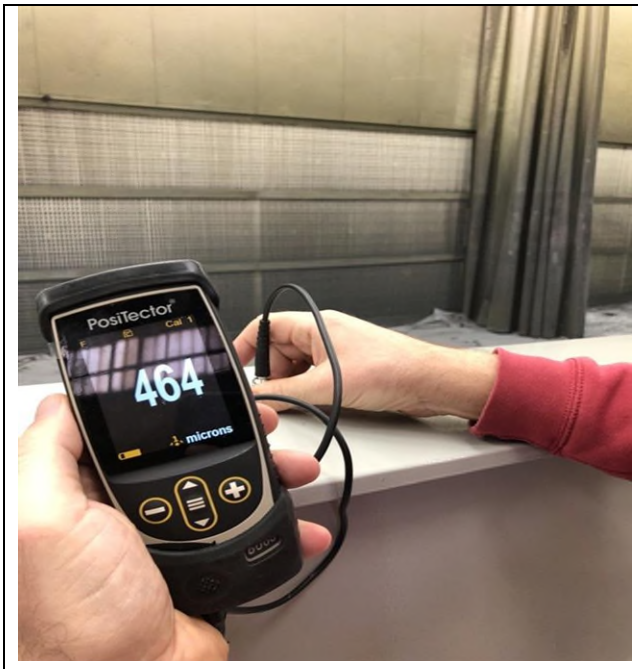
DFT Check external side



DFT Check external side only primer

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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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DFT Check external side



DFT Check external side



DFT Check external side



DFT Check external side

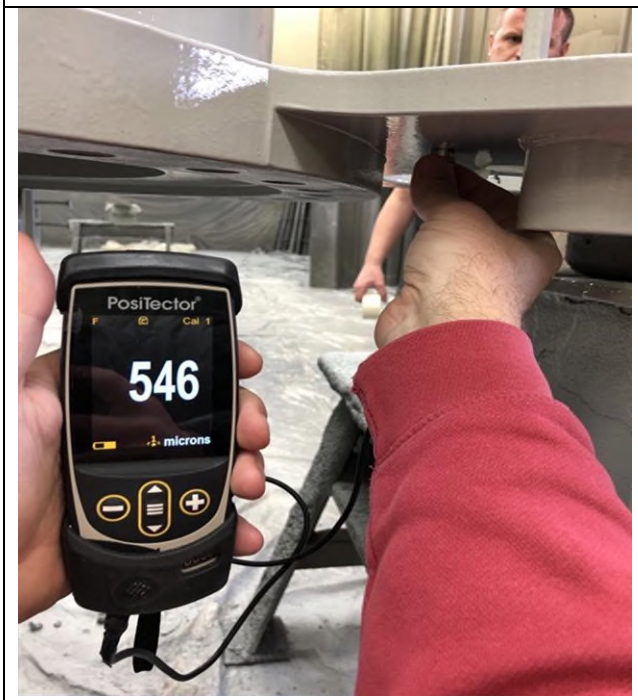
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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



DFT Check internal side



DFT Check internal side



DFT Check internal side



DFT Check internal side

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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-002	SHEET 9 of 13
		Data *Date* 30/10/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object: Boom & Trolley of Davit Crane*	



Overview Trolley external sisde

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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Ral Color 7038

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ROSETTI MARINO SpA Michele Secchi Quality Control Dept. NACE #35424		



DFT Check internal side



DFT Check internal side



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DFT Check internal side

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ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

Via S. Silvestro, 92
21100 Varese
Tel + 39 0332 213045
212639 - 220185
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www.assicontrol.com
e-mail: info@assicontrol.com
C.F. e P.I. 02436670125

STRUMENTI & SERVIZI
per il sistema qualità

Nr. 86990/A/0001/UK/IT
Sistema di Gestione Qualità Assicontrol
certificato secondo la norma ISO 9001:2015

CERTIFICATO DI TARATURA

N° 8735/24

Destinatario: **SEA METAL S.r.l.**

Oggetto della taratura: **spessimetro**
Metodo: verifica per comparazione con strumento e campioni primari
Utilizzo: misuratore di spessore di rivestimento

Visualizzatore tipo: **Positector Std** Matricola: **892160**

Sonda tipo: **FKS** Matricola: **1022281**

Sonda tipo: / Matricola: **/**

Costruttore: DeFelsko

Procedura utilizzata per la verifica: CP01/1

Data: 30-08-24

Intervallo di verifica: 12 mesi

Esecuzione attività c/o Assicontrol S.r.l.

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili).
Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto.
Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

ASSICONTROL CENTRO TARATURE ISO 9001

Il responsabile di laboratorio: C. Alborghetti firma _____

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Verifica spessimetro per comparazione con strumento e campioni primari
Procedura: CP01/1
Visualizzatore tipo: positector std matricola: **892160** campo di misura: 0 – 13 mm
Sonda tipo: FKS matricola: 1022281 principio di funzionamento: induzione magnetica

Strumento utilizzato per la comparazione: Megacheck Master matricola: 3655
Sonda utilizzata tipo: PFN-52D matricola: 4765
monopolare [x] bipolare [ ]
Principio di funzionamento: induzione magnetica [x] correnti parassite [x]

La catena di riferibilità ha inizio con i seguenti campioni primari Accredia per il confronto indiretto		
Valore	Matricola	N° certificato
vedi certificato	070264	Accredia 230 DIM_001/23
11.9 um	0321934	Accredia 166 23-L0001
48.8 um	1220817	Accredia 166 23-L0001
99.3 um	1222611	Accredia 166 23-L0001
275.7 um	0521017	Accredia 166 23-L0001
732.4 um	1222612	Accredia 166 23-L0001

Base di riferimento utilizzata: acciaio magnetico spessore 2 mm. dimensioni 30 x 70 mm
Zona di misurazione su base e su lamina: centrale
Le misure sono state effettuate nelle seguenti condizioni ambientali:
temperatura 20°C ± 2°C umidità 50% ± 5%

test nr	valore nominale (mm)	valore letto (mm)	errore (mm)	Incertezza di misura < ± (mm)
1	1,00	0,99	-0,01	0,009
2	2,00	2,02	0,02	0,018
3	3,00	3,05	0,05	0,045
4	4,00	3,98	-0,02	0,018
5	5,00	5,05	0,05	0,045
6	6,00	5,93	-0,07	0,063
7	7,00	6,95	-0,05	0,045
8	8,00	8,11	0,11	0,099
9	9,00	9,15	0,15	0,135
10	10,00	9,85	-0,15	0,135
			Scostamento medio dal valore nominale	± 1,16 % v.l.
			Ripetibilità	95 %

Note: misure effettuate dopo aver calibrato lo strumento.

I valori sopraesposti sono relativi al controllo su 5 punti, lo strumento controllato su tutto il campo di misura con l'ausilio di altri campioni ha mostrato scostamenti entro la precisione ammessa dal costruttore.
Norme di riferimento: ISO2178 (metodo a induzione magnetica), ISO2360 (metodo a correnti parassite).

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.

Data delle prove: 30-08-24 Tecnico di laboratorio

ASSICONTROL Divisione ASSISTENZA e TARATURE

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ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-003	SHEET 1 of 14
		Data *Date* 13/11/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
10	1	Column of Davit Crane	C09-0001-P0002	Visual Check blasting	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN – Davit Crane	1724001010-QC-ITP-00002	04	AFC
PAINTING PROCEDURES - Davit Crane	1724001010-MAT-PRO-00007	02	AFC
FIXED COLUMN CARPENTERY	C09-0001-P0002	F	-

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 out 11/11/2024 at SeaMetal Srl factory, located in Via Riva Giovanni da Verrazzano 9 – 34148 Trieste (TS) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 05 Rev.0 of 30-10-2024) and in accordance with ITP (STEP 7.01) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Matteo Biancolillo (SeaMetal)
Carlo Ziber (Remazel Enginering QC Dep.)
Marzio Mederici (behalf for Crosswind)

Area of concern
None

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

PROGETTO *Project*	CLIENTE *Client*	COMMESSA / *Job*	COMMESSA FORNITORE / *Job Vendor*
Base Load Power Hub (BLPH)	CROSSWIND	***123A90***	-
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane*	

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO /** *Result*
As per Inspection Notification follow the activities: • Visual inspection • Blasting Check Vessel (Climatic conditions; Grade of cleaness; Anchoring Profile; Dust Test, Water soluble salts)	**Satisfactory**

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*
Elcometer 319	**Elcometer**	**Elcometere G319-T S/N RF17408**	**30-08-2025**
Twin Cond	**Horiba**	**Conductivity Meter B-771 S/N EE5E0085**	**21-10-2025**
Testex Gauge	**Elcometer**	**Testex Gauge E-124-3M S/N RF16348**	**21-10-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
8737/24	Certificate of Calibration	Certificate	3
11183/24	Certificate of Calibration	Certificate	2
11182/24	Certificate of Calibration	Certificate	1

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

None.

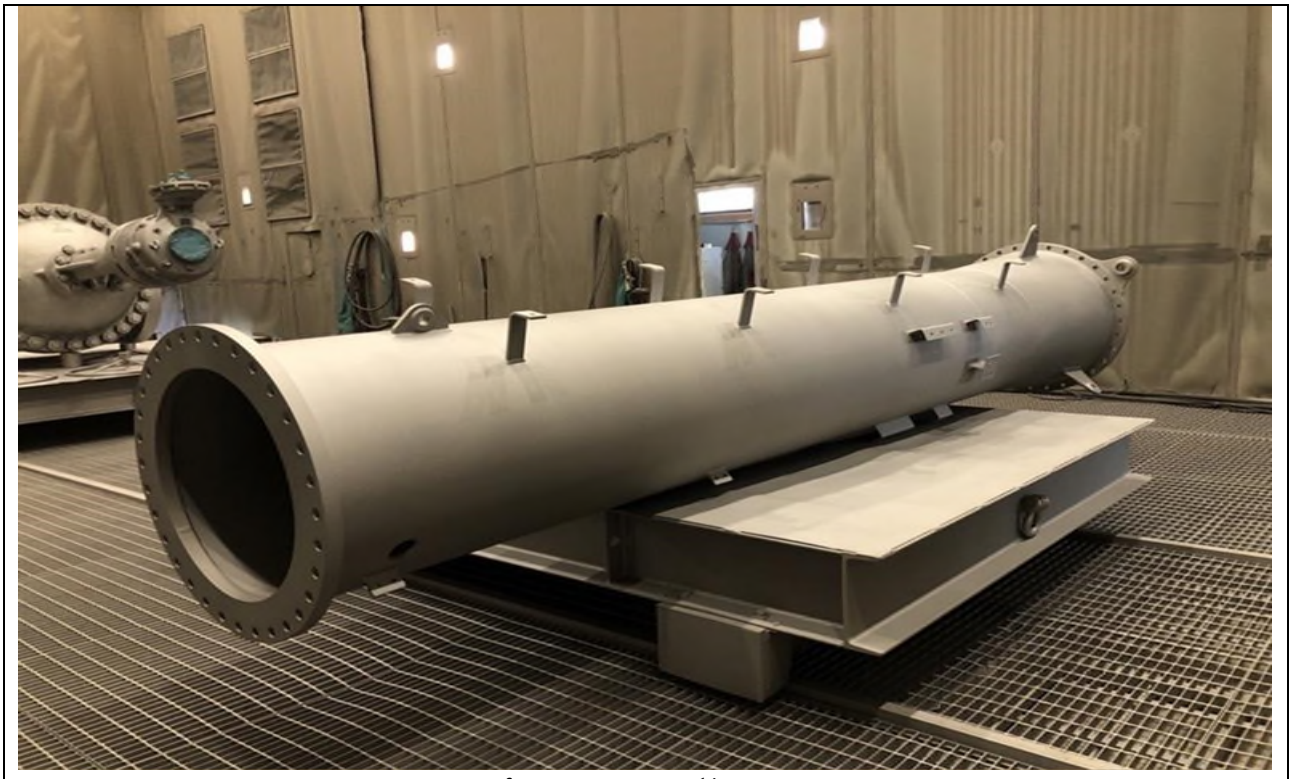
H – STATO PACKING LIST / *Packing List Status*	☐ **EMESSO** / *Issued*	☒ **NON EMESSO** / *Not Issued*	DD/MM/YYYY **ULTIMA DATA UTILE** / *Last Date*

PUNCH LIST REPORT: VEDI ALLEGATO N° / *Refer to Attachment n° NOT APPLICABLE*

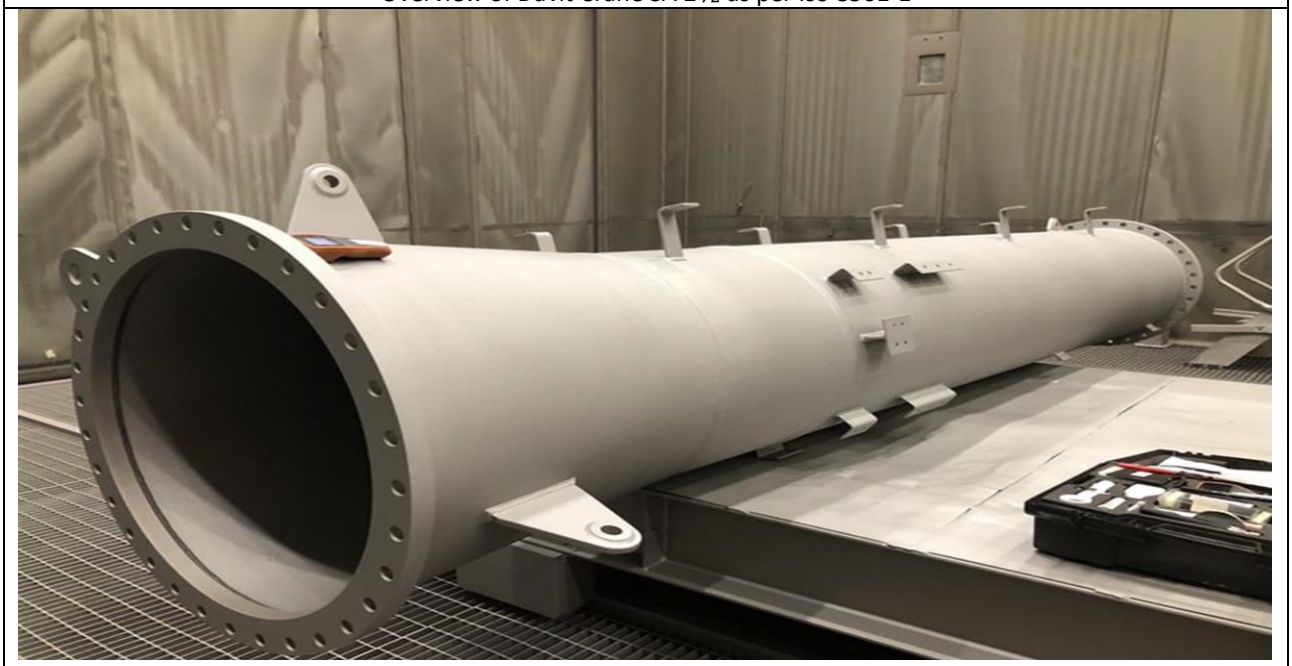
REPORT FOTOGRAFICO (SE PRESENTE) / *Digital Pictures (if any)*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
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Overview of Davit Crane SA 2½ as per Iso 8501-1



Overview of Davit Crane SA 2½ as per Iso 8501-1

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Overview of Davit Crane SA 2½ as per Iso 8501-1. Internal side.

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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-003	SHEET 5 of 14
		Data *Date 13/11/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane*	



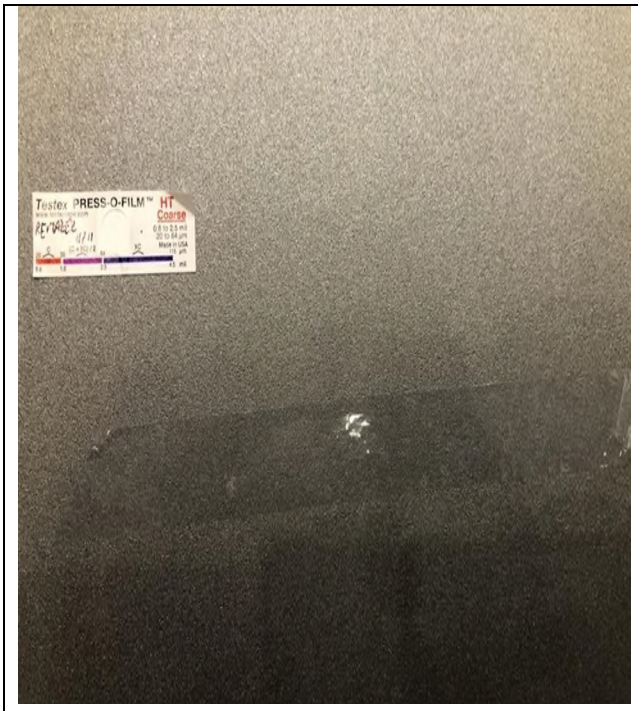
Anchoring Profile As per Iso 8503-5.



Anchoring Profile Check. Range Medium G

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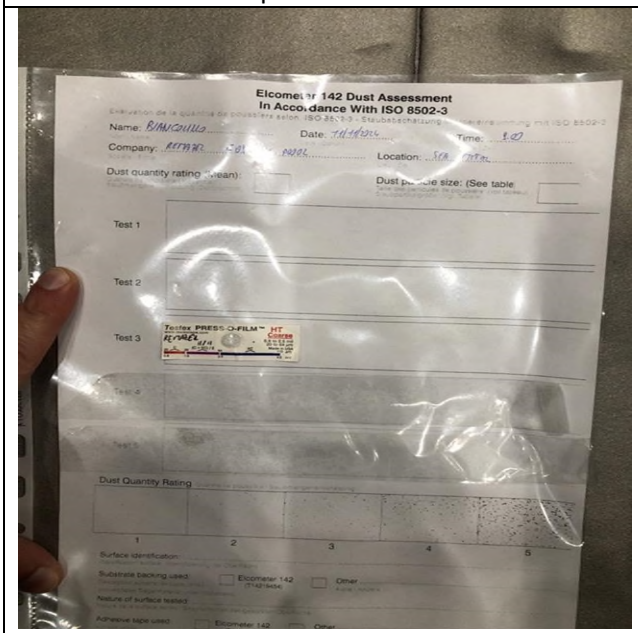
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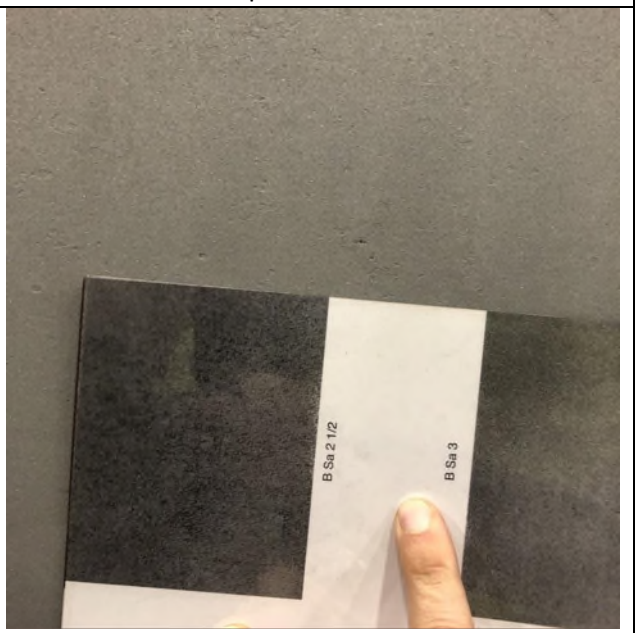
Dust Test Check. As per Iso 8502-3.



Dust Test Check. As per Iso 8502-3.



Dust Test Check. As per Iso 8502-3. Result: Dust Quantity Rating 1; Dust Particle Size 1



Grade of Cleanliness Check. As per Iso 8501-1 Sa2½

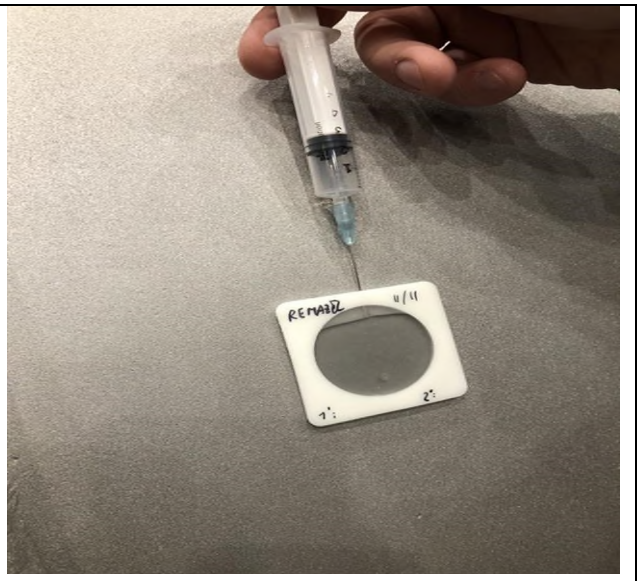
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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-003	SHEET 7 of 14
		Data *Date 13/11/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane*	



Soluble Salts Check. As per Iso 8502-6 & 9.
Conductivity of deionized water 3µS/cm.



Test patch. Fill inside 3 ml of deionized water



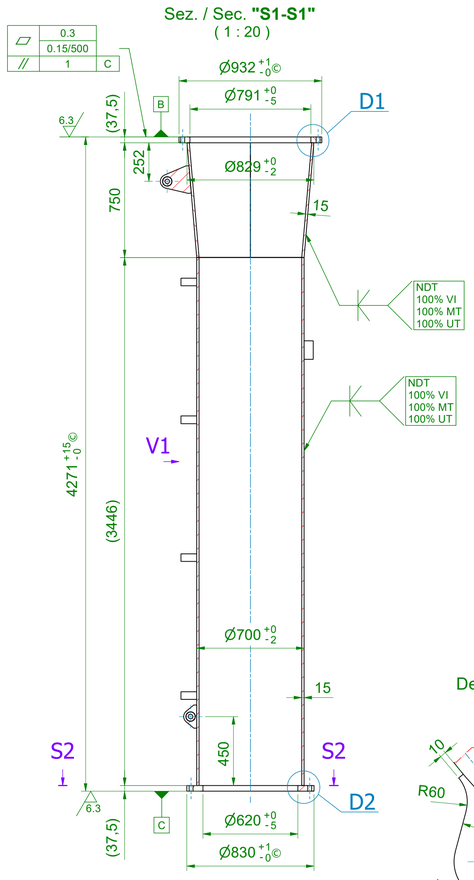
Soluble Salts Check. As per Iso 8502-6 & 9. Direct Reading.
Conductivity of deionized water detected 16 µS/cm after test on the surface. Final result 15.6 mg/m².
Max Acceptable 20 mg/m².

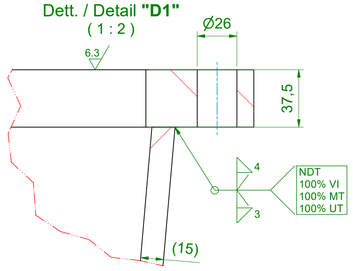


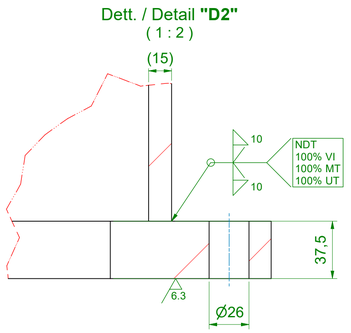
Climatic Condition Check.

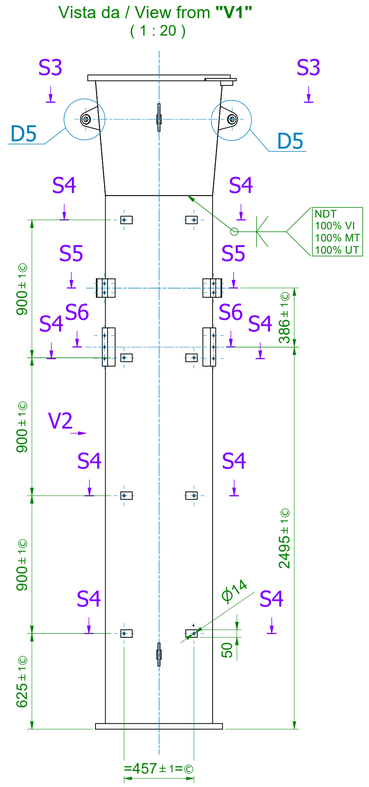
NON VALIDO PER IL RILASCIO DELLA FORNITURA / *It is not valid for the supply's release*

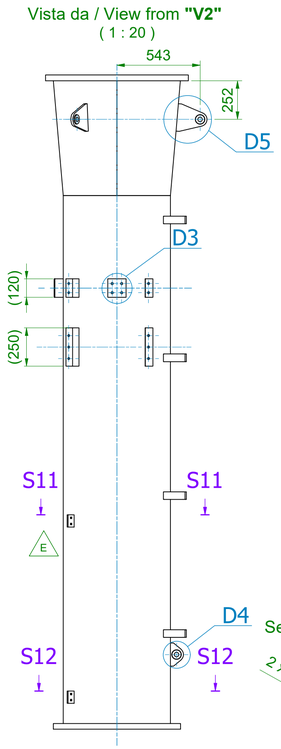
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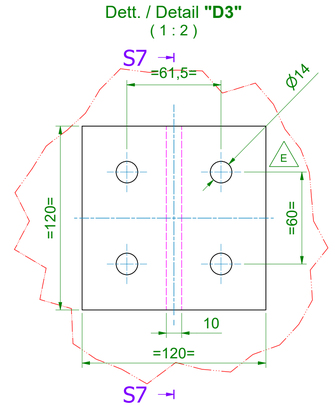


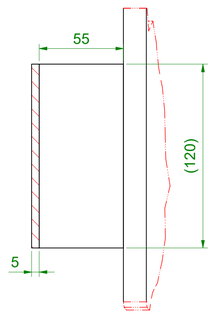


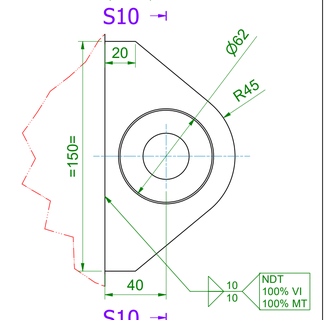


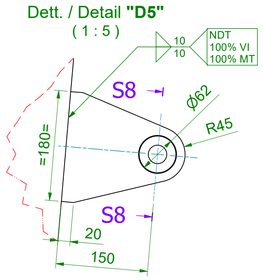


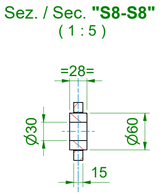


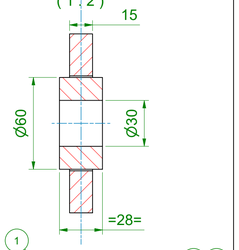


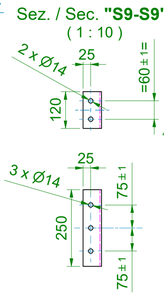


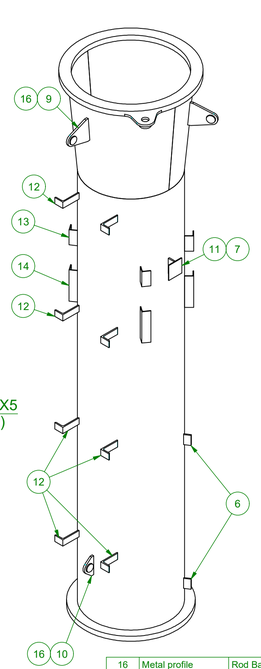


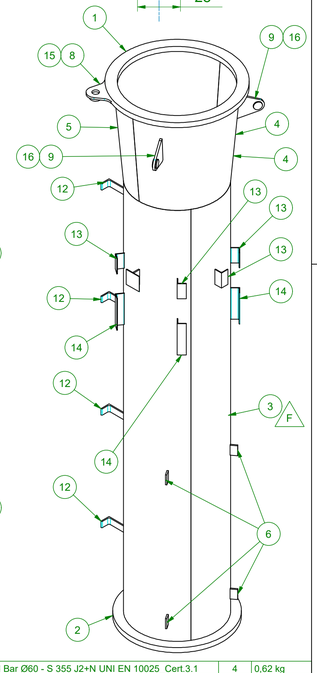


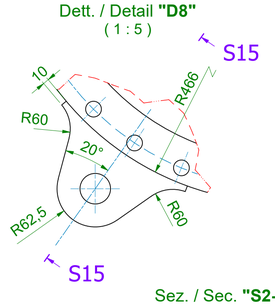


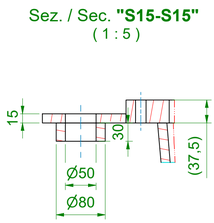


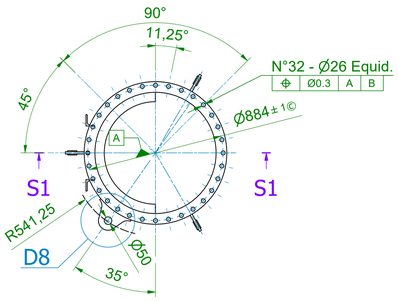


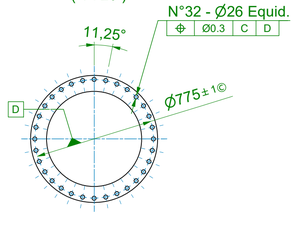


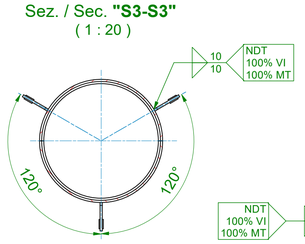


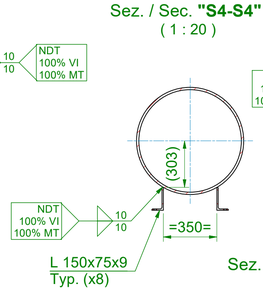


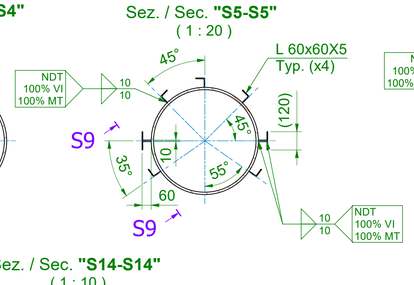


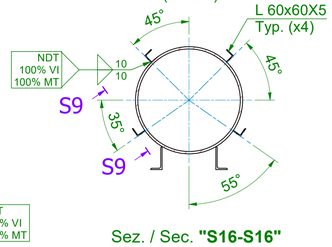


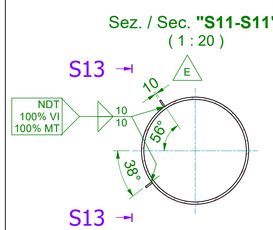


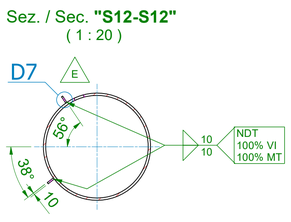


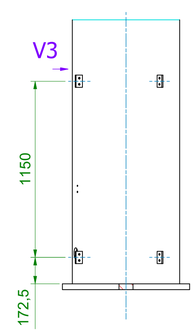


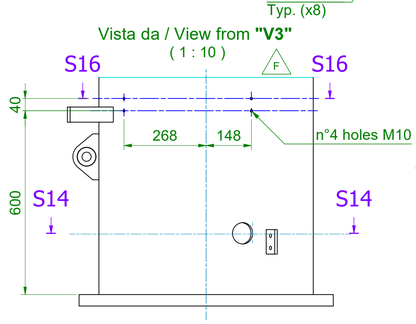


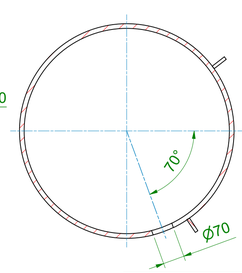


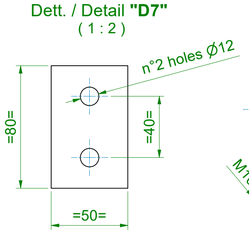


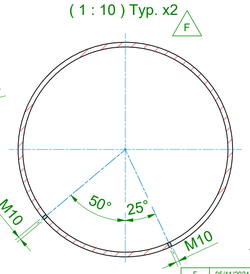












16	Metal profile	Rod Bar Ø60 - S 355 J2+N UNI EN 10025_Cert.3.1	4	0,62 kg
15	Metal profile	Rod Bar Ø60 - S 355 J2+N UNI EN 10025_Cert.3.1	1	1,19 kg
14	Metal profile	L 60x60x5 - S 355 J2+N UNI EN 10025_Cert.3.1	4	1,14 kg
13	Metal profile	L 60x60x5 - S 355 J2+N UNI EN 10025_Cert.3.1	5	0,55 kg
12	Metal profile	L 150x75x9 - S 355 J2+N UNI EN 10025_Cert.3.1	8	0,77 kg
11	Sheet metal	Thk = 5 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,56 kg
10	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	0,72 kg
9	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	3	2,55 kg
8	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	2,07 kg
7	Sheet metal	Thk = 10 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,52 kg
6	Sheet metal	Thk = 10 mm - S 355 J2+N UNI EN 10025_Cert.3.1	4	0,31 kg
5	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	104,4 kg
4	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	104,4 kg
3	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	874,32 kg
2	Sheet metal	Thk = 40 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	82,35 kg
1	Sheet metal	Thk = 40 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	68,5 kg
EL.	DESCRIPTION	ADDITIONAL DESCRIPTION	Q.TY	WEIGHT

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
F	05/11/2024	Aggiunte forature su item 3 / Added holes item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
E	07/10/2024	Aggiornamento Item 6 Item 3 / Update Item 6 Item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
D	11/09/2024	Aggiornamento Item 6 Item 3 / Update Item 6 Item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
C	10/09/2024	Aggiornamento generale / General update	riccardo.sobani	Sobani R.	De Fazio F.	–
B	03/09/2024	Aggiornamento generale / General update	riccardo.sobani	Sobani R.	De Fazio F.	–
A	31/07/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

SALDATURA CONTINUA
CONTINUOUS WELDING

Tutte le saldature testa a testa non indicate a disegno devono essere a piena penetrazione

All head to head weldings not indicated on drawing must be complete penetration joint

NDT
100% VI
100% MT/PT
100% UT

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

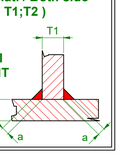
Eliminare spigoli vivi
Remove all edges

Simboli saldatura secondo
Welding symbols according to
UNI EN ISO 2553

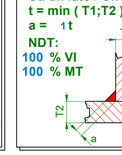
UNI EN ISO 8501-3
Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali
Preparation grade of welds, edges and other areas with surface imperfections

Zona / *Areas*	Grado / *Grade*	R min / *Min radius*
Saldature / *Welded*	P3	N.A.
Bordi / *Edges*	P3	2 mm
Aree con imperf. superf. / *Areas with surface imperf.*	P3	N.A.

SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION
Sui due lati / *Both side*
t = min (T1;T2)
a = 0.5 t
NDT:
100 % VI
100 % MT



SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION
Su un lato / *One side*
t = min (T1;T2)
a = 1 t
NDT:
100 % VI
100 % MT



REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**
Weight : 1228,9 kg
Title : Carpenteria Colonna Fissa / Fixed Column Carpentry
Scale : 1 : 20
Sheet : 1 of 3 **A1**
Drawing State: **Released** / ***FOR CONSTRUCTION***
Q.C.L. : C1
Drawing N° : C09-0001-P0002
Revision : F

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per il sistema qualità

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Sistema di Gestione Qualità Assicontrol
certificato secondo la norma ISO 9001:2015

CERTIFICATO DI TARATURA

N° 8737/24

Destinatario: **SEA METAL S.r.l.**

Oggetto della taratura: **Termoigrometro per ambiente**

Metodo: verifica per comparazione con campioni e/o strumenti primari

Utilizzo: misuratore di umidità relativa e temperatura

Modello: **G319-T** Matricola: **RF17408**

Sonda tipo: **termoigrometrica inc.** Matricola: **/**

Sonda tipo: **per superfici inc.** Matricola: **/**

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili).
Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto.
Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

Procedura utilizzata per la verifica: CP06 / CP03

Data: 30-08-24

Intervallo di verifica: 12 mesi

Esecuzione attività c/o Assicontrol S.r.l.

Il responsabile di laboratorio: C. Alborghetti firma _____

ASSICONTROL CENTRO TARATURA ISO 9001

Registro di laboratorio CERT06	Documento N° 41/7 del 21-07-98	Rev. 1.00

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Verifica termoigrometro per comparazione con campioni primari
Procedura: CP06 Strumento tipo: **G319-T** matricola: **RF17408**
Sonda tipo: **termoigrometrica** matricola: *I*
Metodo di rilevazione umidità: sensore capacitivo
Campo di misura: 0-100% RH -20 +80 °C

UMIDITA'

La catena di riferibilità ha inizio con i seguenti campioni primari:
Igrometro HD4901T matricola 11005609 corredato di certificato ACCREDIA 0069 22 UR

Punto	valore nominale (%RH)	valore letto (%RH)	scostamento dal valore nominale (%RH)
1	35,0	36,3	1,3
2	50,0	51,7	1,7
3	80,0	82,1	2,1
	Scostamento medio dal valore nominale: **1,70 (% RH)**		
	Incertezza di misura: < ± **1,53 (% RH)**		

TEMPERATURA

La catena di riferibilità ha inizio con i seguenti campioni primari:
Termometro digitale HD9219 matricola 003ASC+03000092 corredato di certificato ACCREDIA CTRM24P005330
Norma di riferimento IEC 584 con espressione della temperatura secondo STI 90

Punto	valore nominale (°C)	valore letto (°C)	scostamento dal valore nominale (°C)
1	10,0	9,9	-0,1
2	20,0	19,7	-0,3
3	50,0	49,5	-0,5
	Scostamento medio dal valore nominale: **-0,30 (°C)**		
	Incertezza di misura: < ± **-0,27 (°C)**		

Strumentazione ausiliaria
Camera termoigrometrica M60-TB matricola 38 (M10110593)
Unità criogenica 9705 matricola 34 (811955)

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.

Le misure sono state effettuate nelle seguenti condizioni ambientali:
Temperatura: 23°C ± 1°C
Umidità: 50% u.r. ± 10% u.r.

Data delle prove: 30-08-24 Tecnico di laboratorio _____

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Verifica rilevazioni termometro digitale tipo: **G319-T** matricola: **RF17408**
Sonda tipo: **per superfici** matricola: **/**
Campo di misura: **-20 +80 °C**

Procedura: CP03

La catena di riferibilità ha inizio con i seguenti campioni primari :

Termometro digitale HD9219 matricola 003ASC+03000092 corredato di certificato ACCREDIA CTRM24P005330
Calibratore multifunzione Fluke 5500A matricola 6330020 corredato di certificato ACCREDIA 72520

Norma di riferimento IEC 584 con espressione della temperatura secondo STI 90

Strumentazione ausiliaria
Strumento calibratore Thermostatic calibrator Pyros matricola F087 00.
Strumento calibratore Thermostatic calibrator Pyros matricola C152 95.
Unità criogenica 9705 matricola 34 (811955)

Risultati della verifica

Punto	valore nominale (°C)	valore letto (°C)	scostamento dal valore nominale (°C)	Incertezza di misura (< ±°C)
1	10,0	10,2	0,2	0,18
2	20,0	20,3	0,3	0,26
3	40,0	40,3	0,3	0,26
4	60,0	60,5	0,5	0,44
5	80,0	80,6	0,6	0,53
	Scostamento medio dal valore nominale:		0,38 (°C)	

Note: i valori letti sono la media di più misurazioni.

Considerazioni: /

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.

Le misure sono state effettuate nelle seguenti condizioni ambientali:
Temperatura: 23°C ± 1°C
Umidità: 50% u.r. ± 10% u.r.

Data delle prove: 30-08-24 Tecnico di laboratorio

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CERTIFICATO DI TARATURA

N° 11183/24

Destinatario: **SEA METAL S.r.l.**

Oggetto della taratura: **Conduttivimetro digitale portatile**

Metodo: verifica con soluzioni di valore noto

Utilizzo: misurazione di valori di conducibilità

Modello: **B-771** Matricola: **EE5E0085**

Sonda tipo: **incorporata**

Campo di misura: **0 – 19,9 mS**

Costruttore: **Horiba**

Procedura utilizzata per la verifica: CP031

Data: 21-10-24

Intervallo di verifica: 12 mesi

Esecuzione attività c/o Assicontrol S.r.l.

Il responsabile di laboratorio: C. Alborghetti firma _____

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili).
Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto.
Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

La riproduzione del presente documento è ammessa in copia conforme integrale. La riproduzione parziale è consentita soltanto a seguito di autorizzazione scritta del Centro di emissione del documento.

Verifica rilevazioni conduttivimetro digitale
Tipo: **B-771** matricola: **EE5E0085**
Sonda tipo: **incorporata**

Procedura: CP031

soluzioni primarie utilizzate:			
Numero lotto	22911119	20106202	20807112
Valore nominale	84.2 uS/cm	1402 uS/cm	12890 uS/cm
Temperatura di riferimento	25 °C	25 °C	25 °C
Certificato P/N	1527889	1528005	1528123
Tracciabilità primaria NIST Standards Reference Material 999b			

Risultati della verifica

Punto	Scala (uS)	Coefficiente cella (K)	valore di riferimento (uS)	valore letto (uS)	scostamento dal valore nominale (uS)
1	199	/	84,2	88	3,8
	(mS)	(K)	(mS)	(mS)	(mS)
2	1,99	/	1,402	1,39	-0,012
3	19,9	/	12,890	12,0	-0,890
			Incertezza di misura :	3,60	(±% v.l.)

Note: misure effettuate con compensazione termica (*rif. temp. soluz. 25°C).
I valori letti sono la media di più misurazioni dopo aver calibrato lo strumento; a volte il conduttivimetro non misura correttamente.

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.

Le misure sono state effettuate nelle seguenti condizioni ambientali:
Temperatura: 23°C ± 1°C
Umidità: 50% u.r. ± 10% u.r.

Data delle prove: 21-10-24 Tecnico di laboratorio

ASSICONTROL Divisione ASSISTENZA e TARATURE

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RAPPORTO DI PROVA n° 11182/24

Destinatario: **SEA METAL S.r.l.**

Descrizione strumento: **Comparatore**
Matricola: **RF16348**
Modello: E-124-3M
Tipo di lettura: analogico
Campo di misura: 5 mm
Risoluzione: 0,002 mm
Norma di riferimento: DIN 862
Nr. procedura interna: CP012

Strumenti usati per la verifica:
Blocchetti piano paralleli
Macchina di misura DMS 680 Joint matricola 0163
La catena di riferibilità ha inizio con i seguenti campioni primari:
Nr.70264 con certificato Accredia nr. 230 DIM_001/23

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili).Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto. Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

Risultati della verifica

nr. Test	valore nominale (mm)	valore letto (mm)	scostamento (mm)	eccedenti (mm)
1	1,000	1,004	0,004	/
2	2,000	2,004	0,004	/
3	3,000	3,002	0,002	/
4	4,000	4,002	0,002	/
5	5,000	5,002	0,002	/
		Incertezza di misura:	± 0,002 (mm)	

N.B. I valori letti sopra indicati sono valori stimati e media di più misurazioni.

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.
Le misure sono state effettuate nelle seguenti condizioni ambientali: temperatura 23°C ± 1°C; umidità 50% u.r. ± 10% u.r.

Osservazioni: con* = fuori norma

Esito: POSITIVO

Tecnico di laboratorio_____

Data delle prove: 21-10-24

Intervallo di verifica: 12 mesi

Il responsabile di laboratorio: C. Alborghetti

firma _____

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-004	SHEET 1 of 8
		Data *Date* 21/11/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Slewing Ring of Davit Crane*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
1	1	Slewing Ring of Davit Crane	006-0006-C0123	Visual Check DFT	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN	1724001010-QC-ITP-00002	04	AFC
VALVES SURFACE PREPARATION AND PAINTING PROCEDURES	1724001010-MAT-PRO-00007	02	AFC

Remarks: None.

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 out 21/11/2024 at Galperti Tech Forged products S.p.A. factory, located in Via Ombriano,14 – 23823 Colico (LC) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 06 Rev.00 of 08-11-2024) and in accordance with ITP (STEP 7.02-7.03) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Thomas Acquistapace (Galperti S.p.A.)
Carlo Ziber (Remazel Enginering QC Dep.)
Franco Corbellini (behalf for Crosswind)

Area of concern
None

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #3544		

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-004	SHEET 2 of 8
		Data *Date* 21/11/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Slewing Ring of Davit Crane*	

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO /** *Result*
As per Inspection Notification follow the activities: • Visual inspection • Slewing Ring of Davit Crane internal side DFT (320 micron) • DFT check Pedestal only primer coat nominal DFT 80 µm (See vendor coating system as per coating spec. 1724001010-MAT-PRO-00007).	**Satisfactory**

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*
Positector	**Defelsko**	**Positector STD**	**19-02-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
2192/24	Certificate of Calibration	Certificate	1

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

None.

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-004	SHEET 3 of 8
		Data *Date* 21/11/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Slewing Ring of Davit Crane*	



Overview Slewing Ring of Davit Crane

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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Overview Slewing Ring of Davit Crane. Tag Number.

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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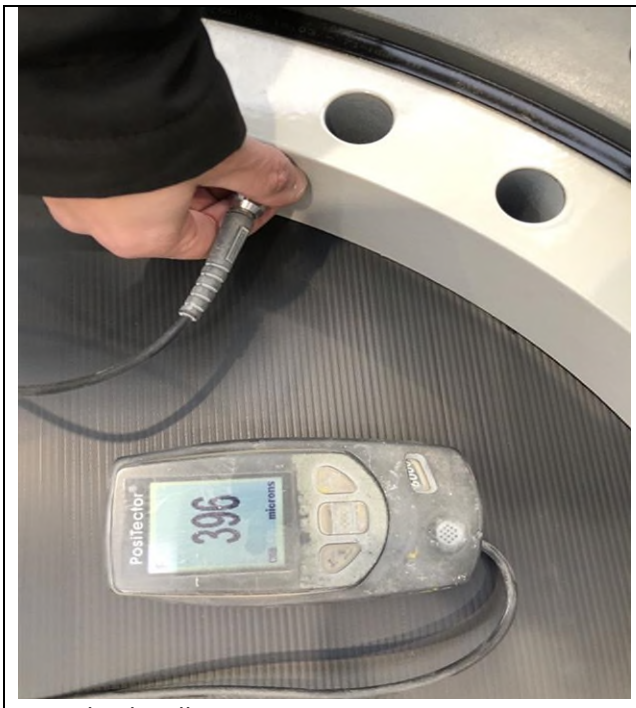


Serial Number Positector



DFT Calibration

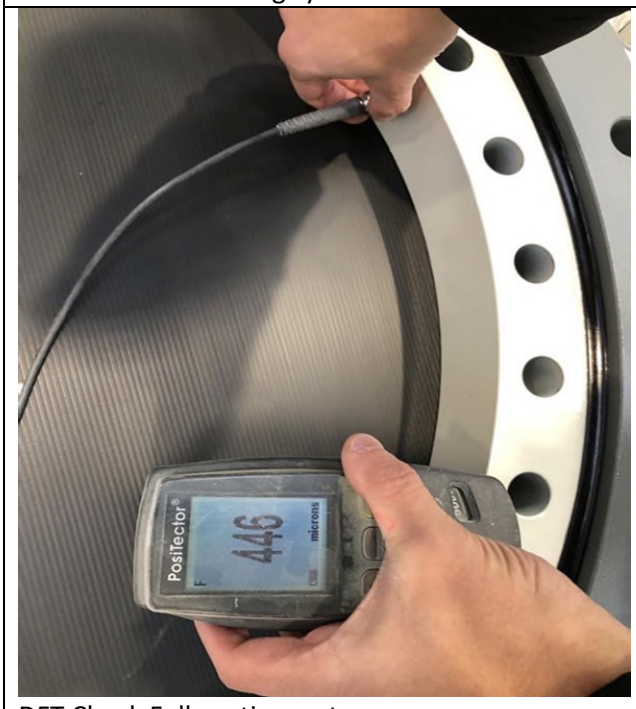
L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		



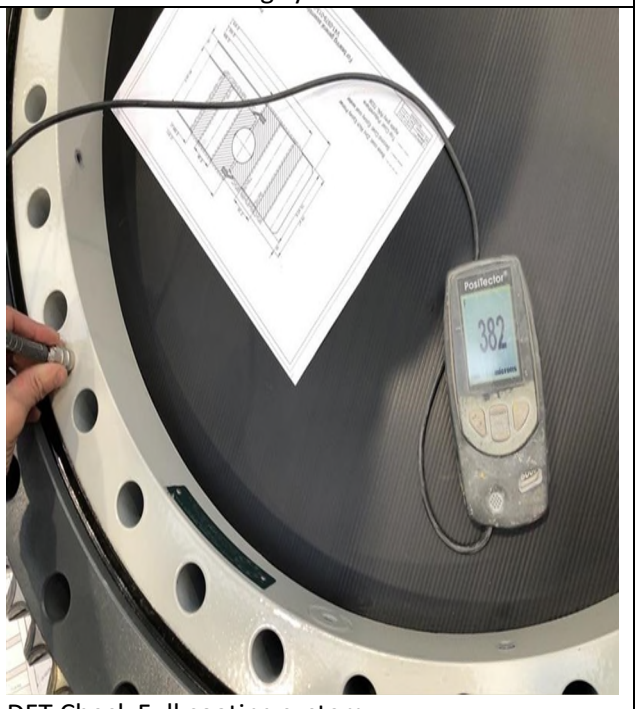
DFT Check Full coating system



DFT Check Full coating system



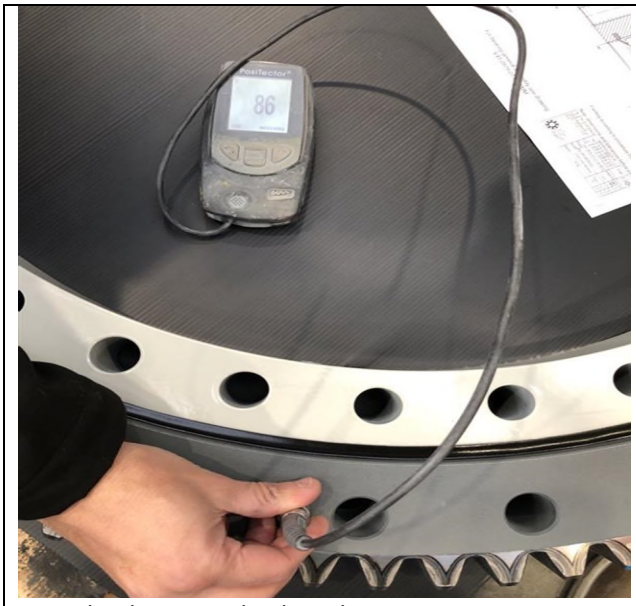
DFT Check Full coating system



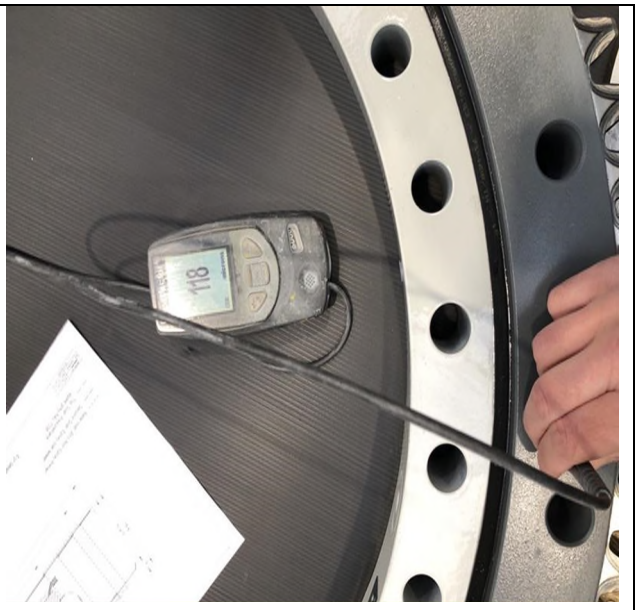
DFT Check Full coating system

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

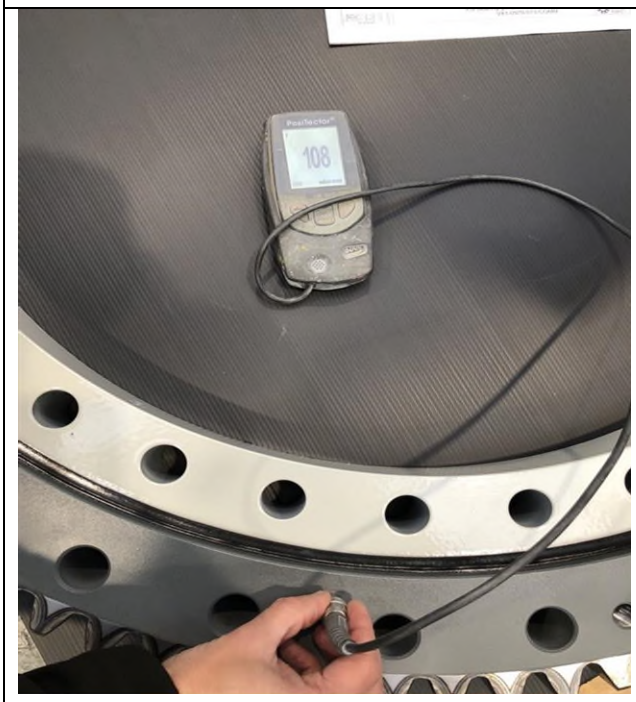
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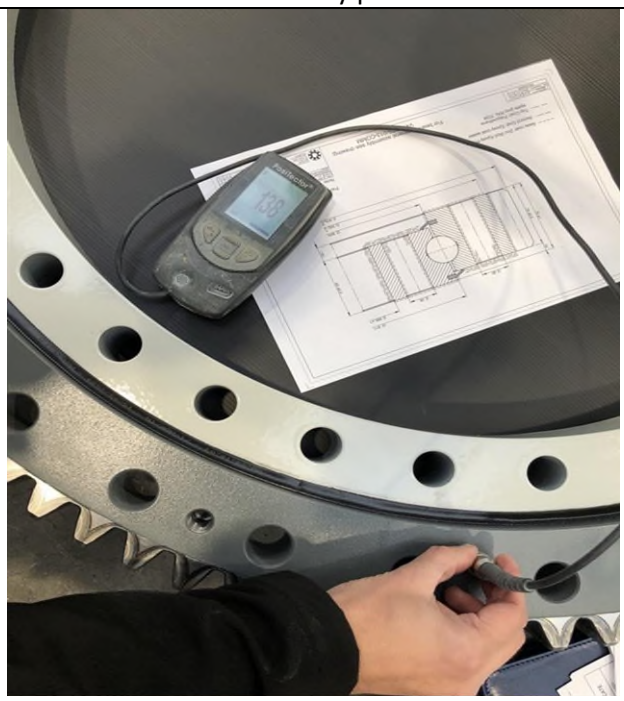
DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer



DFT Check external side only primer

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

21-11-2024
FRANCO CORBELLINI
083
CROSSWIND R

Vision on quality
www.tqc.eu

Laboratorio Metrologico / Metrology Laboratory

CERTIFICATO DI TARATURA
CERTIFICATE
N° 2192/24

Destinatario: **GALPERTI TECH FORGED PRODUCTS S.p.A.**
Customer

Oggetto della taratura: **strumento multifunzione**
*Description: **thickness gauge***
Metodo: verifica per comparazione con strumento e campioni primari
Method: verify by comparison with master samples / instruments
Utilizzo: misuratore di spessore di rivestimento
Use: instrument for thickness coating measurements

Visualizzatore / *viewer:* **Positector STD** Matricola / *s/n:* **773199**

Sonda tipo / *Probe:* FNS Matricola / *s/n:* **376919**

Costruttore / *Manufacturer:* DeFelsko

Procedura utilizzata per la verifica: CP01/1
Procedure

Data: 19-02-24
Date

Intervallo di verifica: 12 mesi
Checking every: 12 months

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili). Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto. Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezze degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

Procedure of verify.
The procedure used for the verify provides the use of master samples / instruments certificated by Accredia centres or equivalent recognized at international level (where available).
The verifies are effected by direct or in direct comparison between the sample / instrument to calibrate and the master sample / instrument using support equipments.
The object of the verify and the master samples / instruments are arranged to be ready to take measures, they stay in the test room about two hours at controlled temperature and humidity. Some significant measures are taken, and they are annotated on the internal technical-report. The arithmetical mean of the errors, which have been taken, is calculated. Than the reading repeatibility is verified. So the uncertainty of measure is determined, it comes from the: errors, reading repeatibility, uncertainty of the samples / instruments used for the test, thermic deviation, noise, where applicable. Than the result of the verify or the conformity with the reference standard is determined, if they are provided. At the end of the compilation of the internal technical-report, the verify document can be compiled. Finally the label of occurred calibration is affixed on the sample / instrument.

Il responsabile di laboratorio: C. Alborghetti firma _____
Head of laboratory *signature*

Registro di laboratorio CERT01-1 *Laboratory registration*	Documento N° 26/4 del 15-04-98 *Document nr. 26/4 dated 15-04-98*	Rev. 1.01

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www.tqcitaly.it/www.tqc.eu
info@tqcitaly.it

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-005	SHEET 1 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
10	1	Column of Davit Crane	C09-0001-P0002	Visual Check and inal DFT	**Satisfactory**
20	10	Handrails	C09-0001-P0074 C09-0001-P0075	Visual Check and inal DFT	**Satisfactory**
30	2	Vertical Ladder	C09-0001-P0008 C09-0001-P0010	Visual Check and inal DFT	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN – Davit Crane	1724001010-QC-ITP-00002	03	AFC
PAINTING PROCEDURES - Davit Crane	1724001010-MAT-PRO-00007	04	AFC
FIXED COLUMN CARPENTERY	C09-0001-P0002	F	-
VERTICAL LADDER	C09-0001-P0008	A	-
VERTICAL LADDER	C09-0001-P0010	A	-
HENDRAIL	C09-0001-P0074	A	-
HENDRAIL	C09-0001-P0075	A	-

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 out 16/12/2024 at Remazel SpA factory, located in Via Giovanni e Sebastiano Caboto 26 – 34148 Trieste (TS) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 10 Rev.1 of 10-12-2024) and in accordance with ITP (STEP 16.03) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Stefano Linari (Rosetti Marino SQL)
Carlo Ziber (Remazel Enginering QC Dep.)
Marco Puzzer (Remazel Project Manager)
Marzio Mederici (behalf for Crosswind)
Area of concern
None

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-005	SHEET 2 of 17
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO /** *Result*
As per Inspection Notification follow the activities: • Visual inspection • DFT Check	**Satisfactory**

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*
Elcometer 456	**Elcometer**	**Elcometer 456 Model S S/N ZM13936**	**03-01-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
456-ZM13936-G	Certificate of Calibration	Certificate	1

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

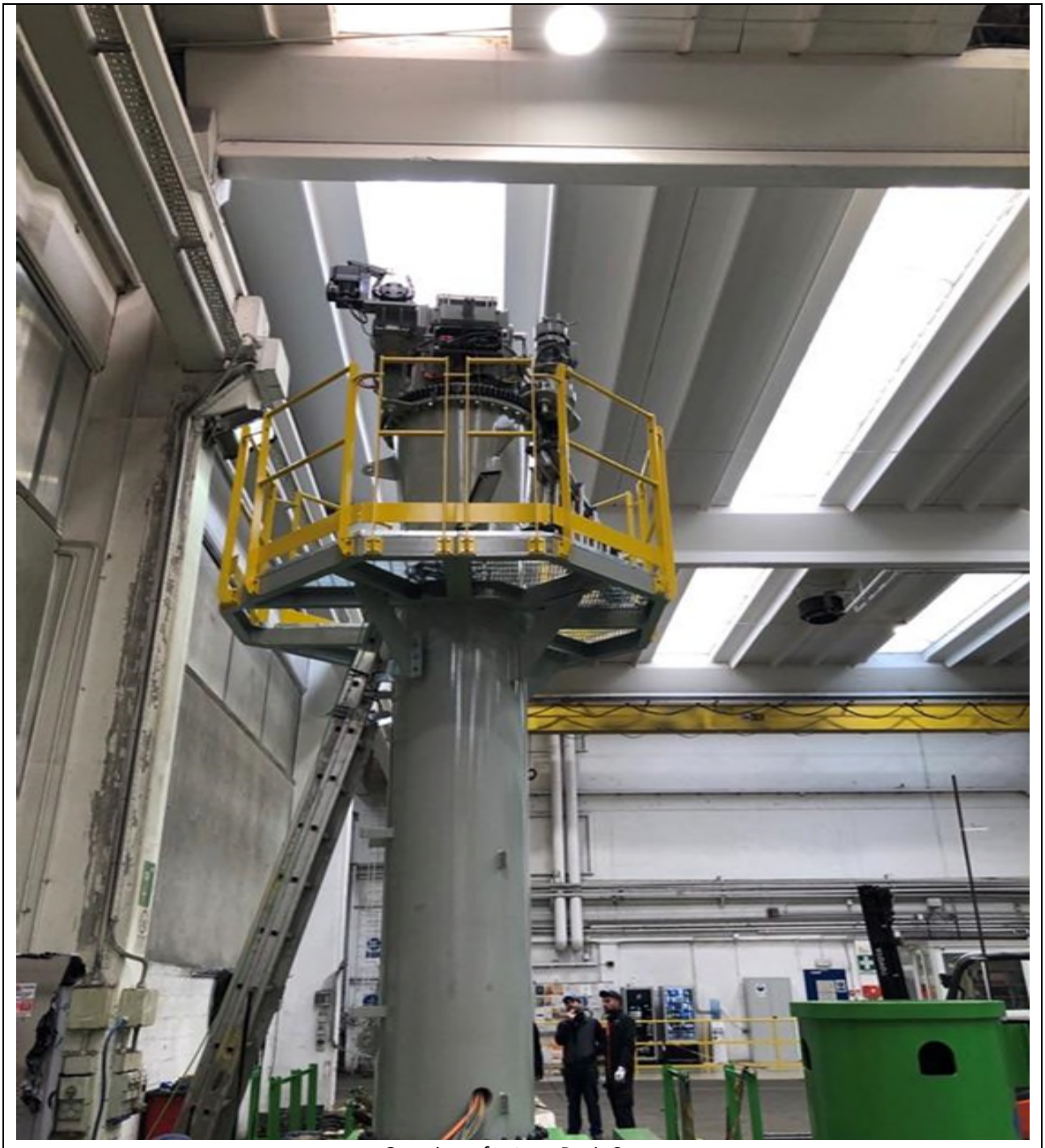
None.

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 SpA Michele Sacchi Quality Control Dept. NACE #3544		



Overview of Column Davit Crane

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-005	SHEET 4 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	



Overview of Column Davit Crane

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	INSPECTION REPORT	**Report No**. IR-REM-1010-005	SHEET 5 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	



DFT Check



DFT Check



DFT Check



DFT Check

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	INSPECTION REPORT	**Report No**. IR-REM-1010-005	SHEET 6 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	



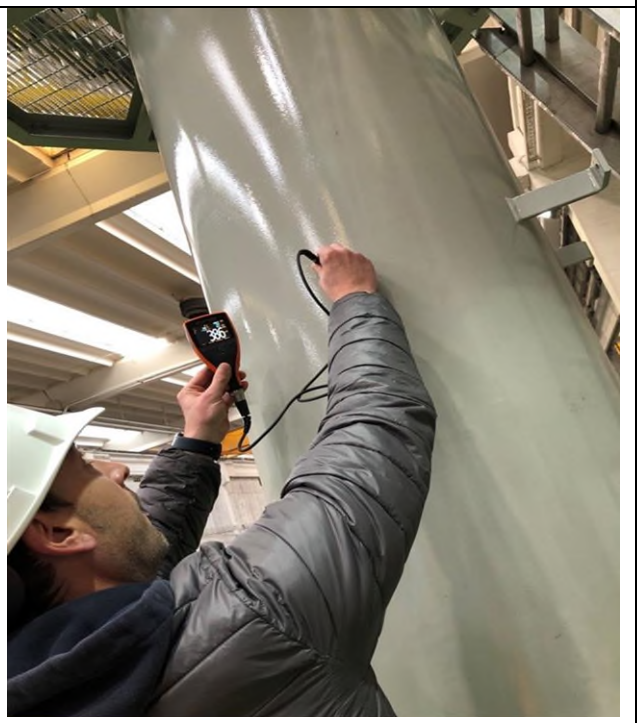
DFT Check



DFT Check



DFT Check



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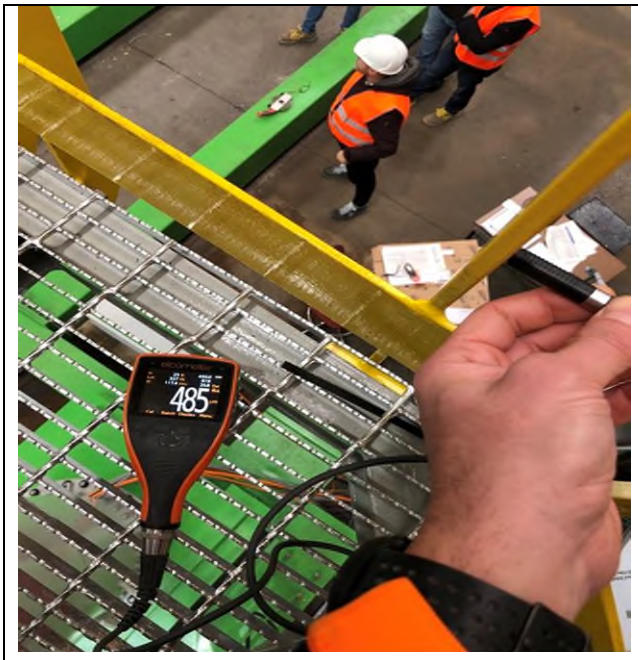


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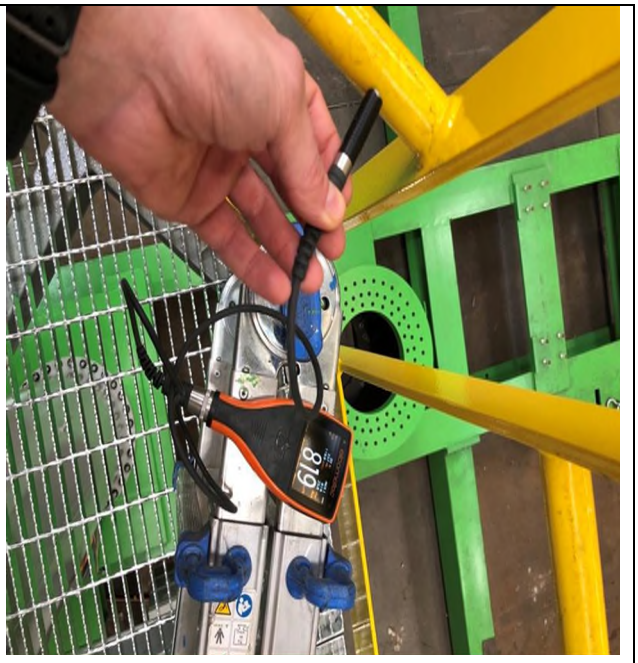
L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

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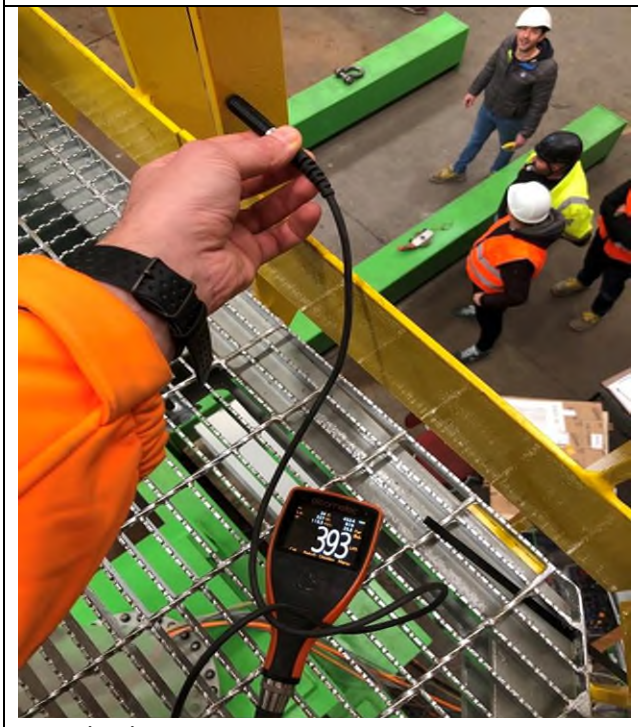
ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-005	SHEET 8 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	



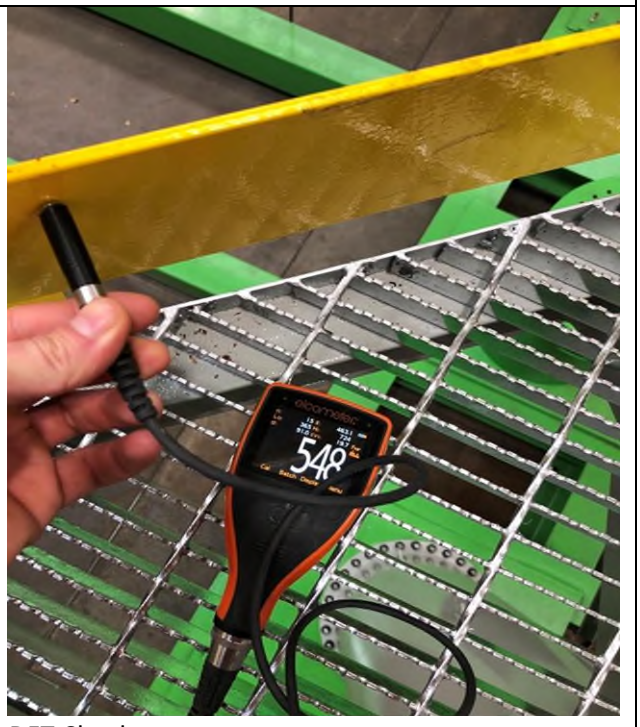
DFT Check



DFT Check



DFT Check



DFT Check.

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35464		

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L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-005	SHEET 10 of 17
		Data *Date 17/12/2024*	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* -
FORNITORE *Supplier: Remazel*	**No. Ordine** *P.O. No.* **1723001010**	**OGGETTO** *Object: Column of Davit Crane, Handrail & Vertical Ladder*	

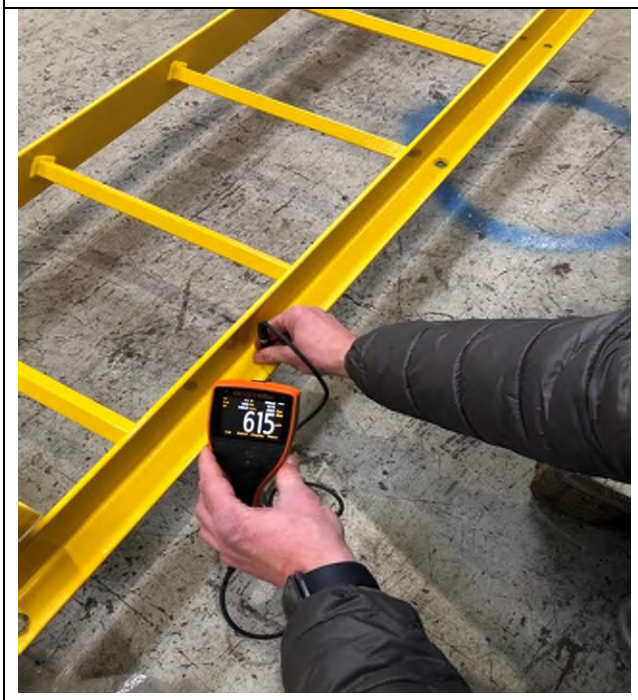
Overview of Vertical Ladder



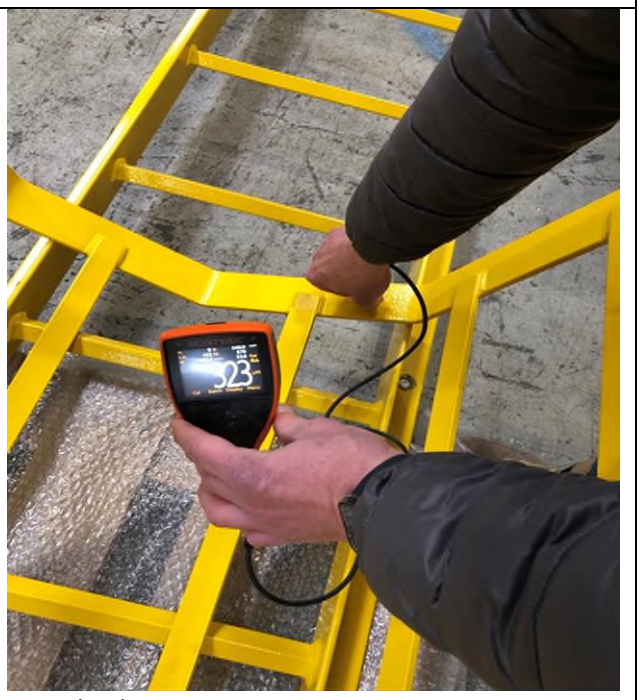
DFT Check



DFT Check



DFT Check



DFT Check.

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35464		

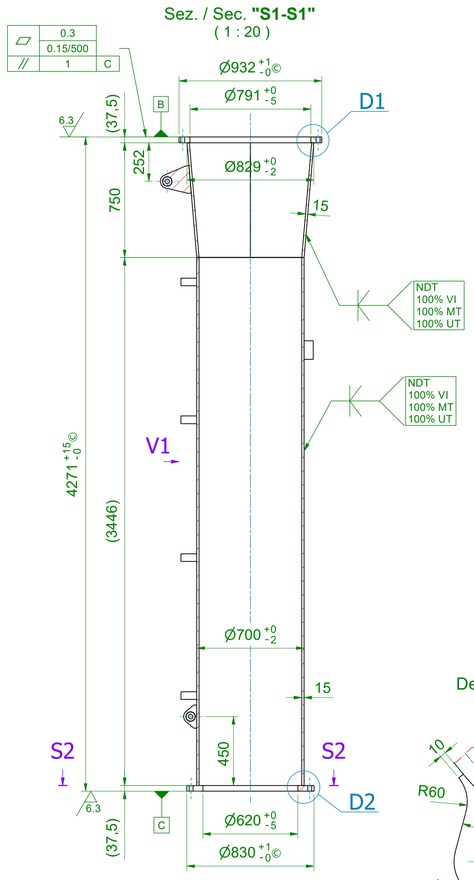
QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
This document does not relieve the Supplier of the responsibility of any possible defects and/or misfunctioning arising during the utilisation.

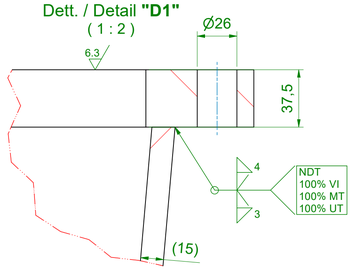


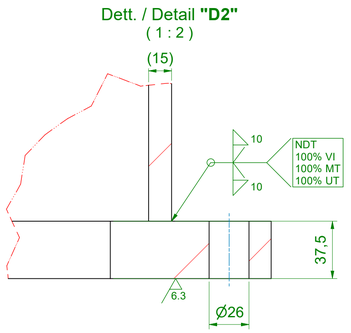
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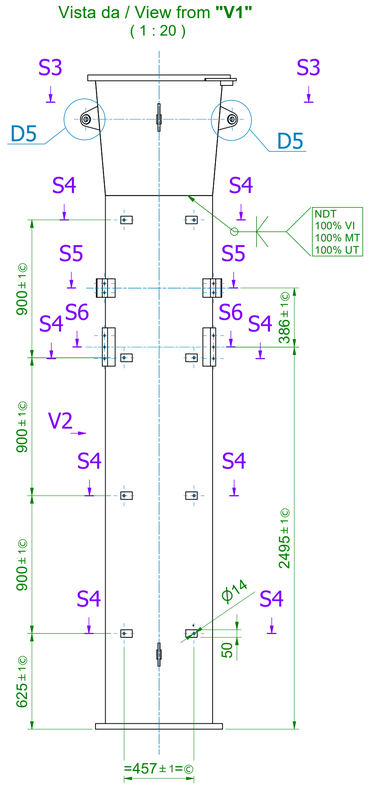
NON VALIDO PER IL RILASCIO DELLA FORNITURA / *It is not valid for the supply's release*

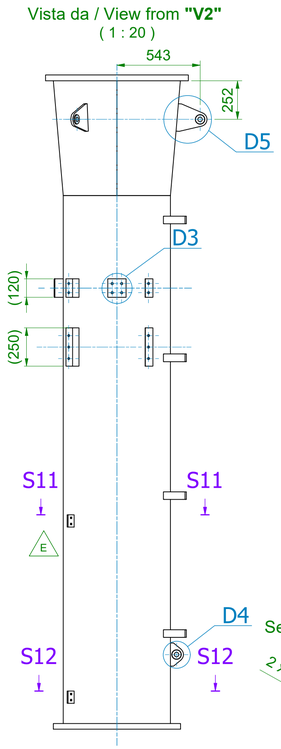
L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

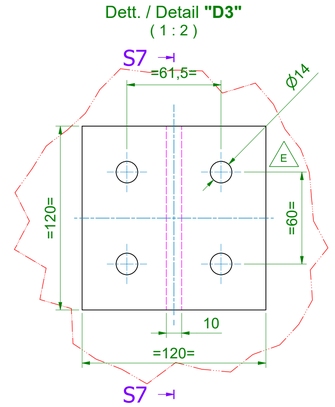


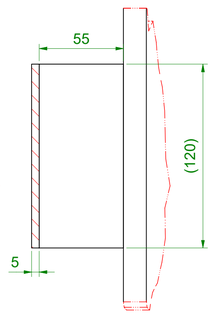


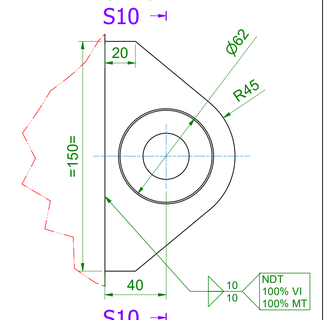


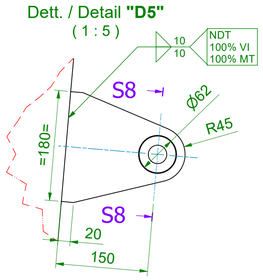


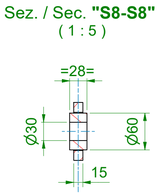


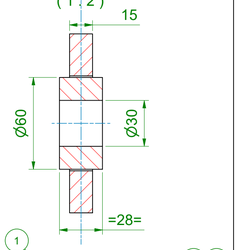


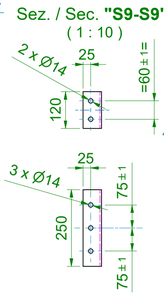


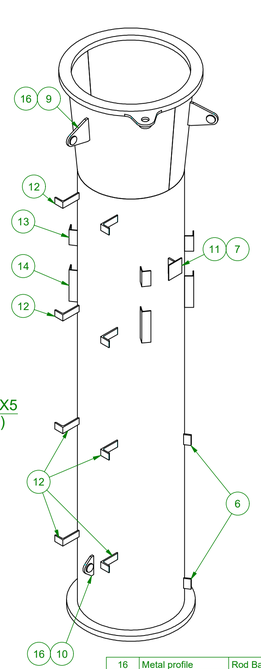


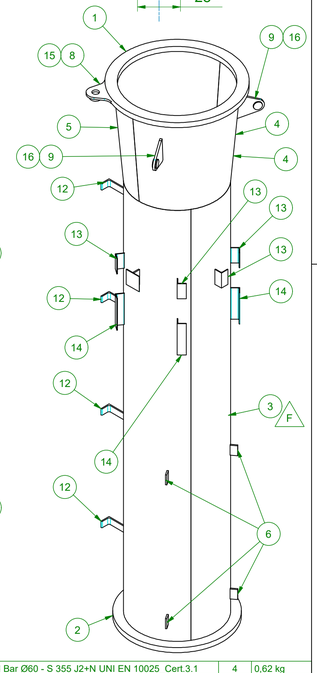


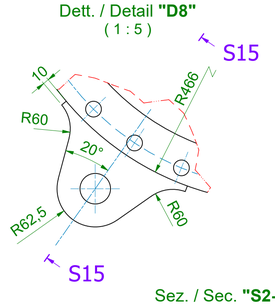


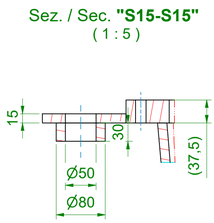


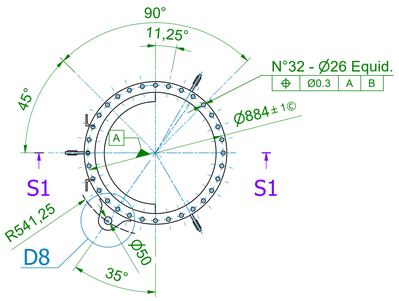


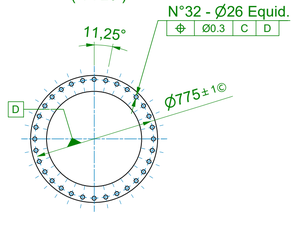


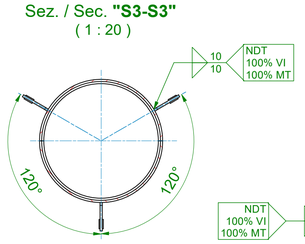


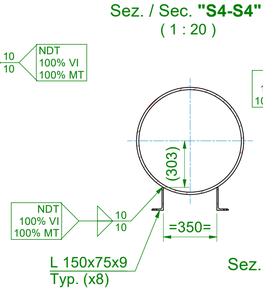


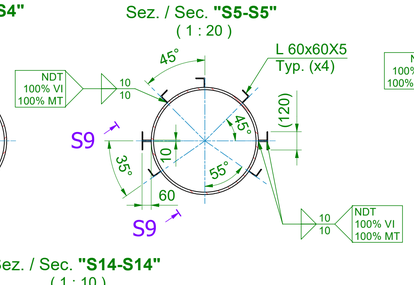


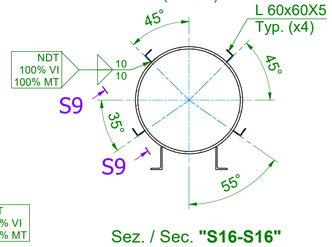


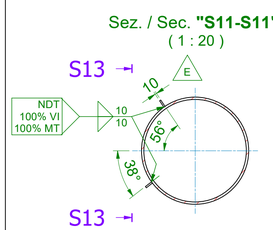


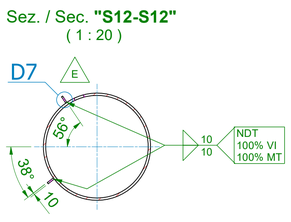


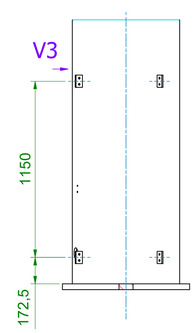


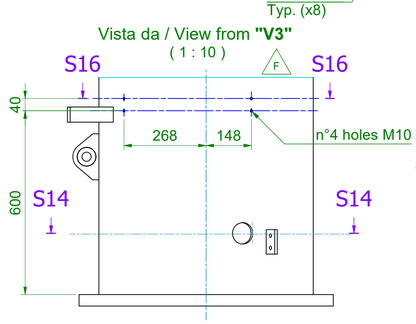


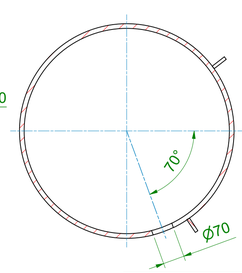


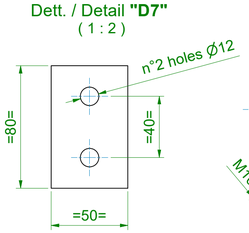


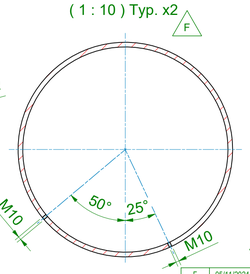












16	Metal profile	Rod Bar Ø60 - S 355 J2+N UNI EN 10025_Cert.3.1	4	0,62 kg
15	Metal profile	Rod Bar Ø60 - S 355 J2+N UNI EN 10025_Cert.3.1	1	1,19 kg
14	Metal profile	L 60x60x5 - S 355 J2+N UNI EN 10025_Cert.3.1	4	1,14 kg
13	Metal profile	L 60x60x5 - S 355 J2+N UNI EN 10025_Cert.3.1	5	0,55 kg
12	Metal profile	L 150x75x9 - S 355 J2+N UNI EN 10025_Cert.3.1	8	0,77 kg
11	Sheet metal	Thk = 5 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,56 kg
10	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	0,72 kg
9	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	3	2,55 kg
8	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	2,07 kg
7	Sheet metal	Thk = 10 mm - S 355 J2+N UNI EN 10025_Cert.3.1	2	0,52 kg
6	Sheet metal	Thk = 10 mm - S 355 J2+N UNI EN 10025_Cert.3.1	4	0,31 kg
5	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	104,4 kg
4	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	104,4 kg
3	Sheet metal	Thk = 15 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	874,32 kg
2	Sheet metal	Thk = 40 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	82,35 kg
1	Sheet metal	Thk = 40 mm - S 355 J2+N UNI EN 10025_Cert.3.1	1	68,5 kg
EL.	DESCRIPTION	ADDITIONAL DESCRIPTION	Q.TY	WEIGHT

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
F	05/11/2024	Aggiunte forature su item 3 / Added holes item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
E	07/10/2024	Aggiornamento Item 6 Item 3 / Update Item 6 Item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
D	11/09/2024	Aggiornamento Item 6 Item 3 / Update Item 6 Item 3	riccardo.sobani	Sobani R.	De Fazio F.	–
C	10/09/2024	Aggiornamento generale / General update	riccardo.sobani	Sobani R.	De Fazio F.	–
B	03/09/2024	Aggiornamento generale / General update	riccardo.sobani	Sobani R.	De Fazio F.	–
A	31/07/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

SALDATURA CONTINUA
CONTINUOUS WELDING

Tutte le saldature testa a testa non indicate a disegno devono essere a piena penetrazione

All head to head weldings not indicated on drawing must be complete penetration joint

NDT
100% VI
100% MT/PT
100% UT

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

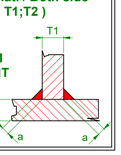
Eliminare spigoli vivi
Remove all edges

Simboli saldatura secondo
Welding symbols according to
UNI EN ISO 2553

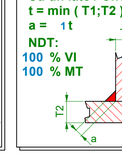
UNI EN ISO 8501-3
Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali
Preparation grade of welds, edges and other areas with surface imperfections

Zona / *Areas*	Grado / *Grade*	R min / *Min radius*
Saldature / *Welded*	P3	N.A.
Bordi / *Edges*	P3	2 mm
Aree con imperf. superf. / *Areas with surface imperf.*	P3	N.A.

SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION
Sui due lati / *Both side*
t = min (T1;T2)
a = 0.5 t
NDT:
100 % VI
100 % MT



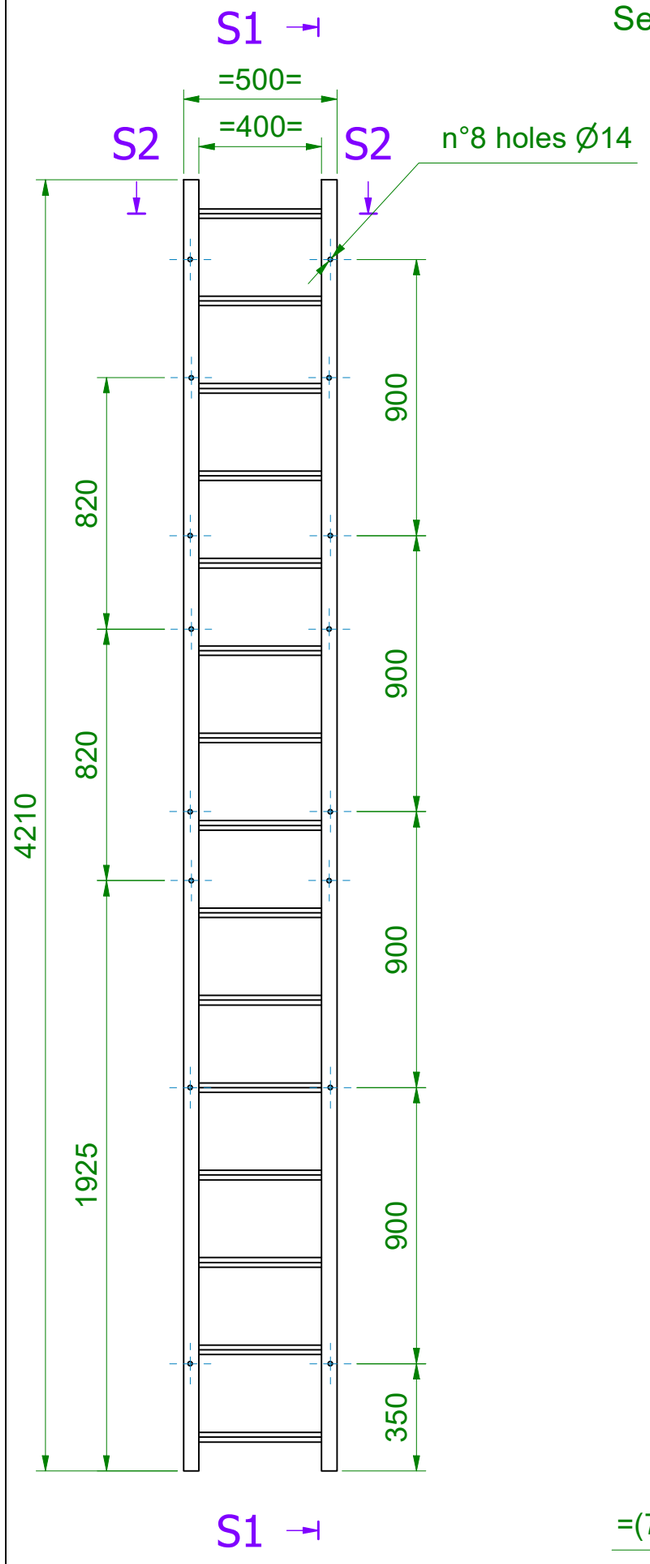
SALDATURE NON QUOTATE
WELD WITHOUT DIMENSION
Su un lato / *One side*
t = min (T1;T2)
a = 1 t
NDT:
100 % VI
100 % MT



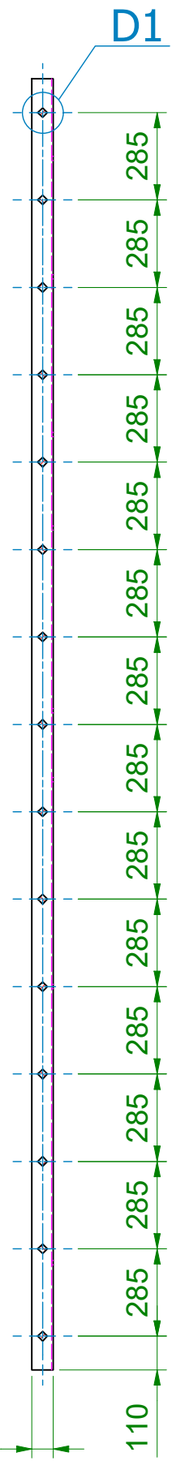
REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**
Weight : 1228,9 kg
Title : Carpenteria Colonna Fissa / Fixed Column Carpentry
Scale : 1 : 20
Sheet : 1 of 3 **A1**
Drawing State: **Released** / ***FOR CONSTRUCTION***
Q.C.L. : C1
Drawing N° : C09-0001-P0002
Revision : F

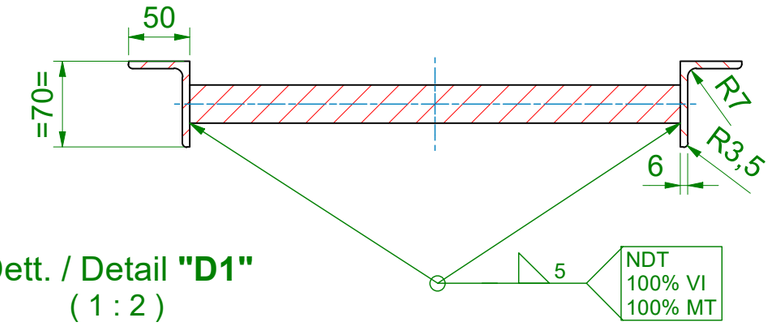
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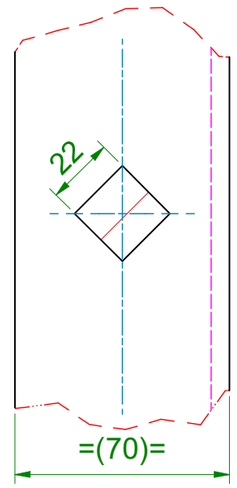
Sez. / Sec. **"S1-S1"**
(1 : 20)

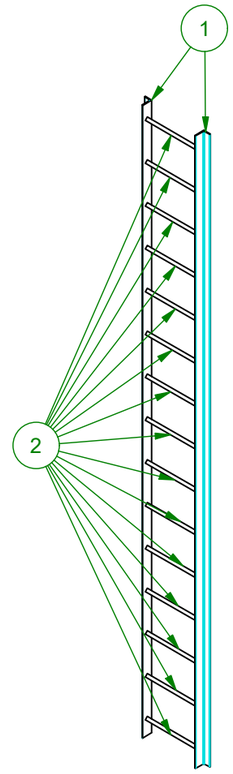


Sez. / Sec. **"S2-S2"**
(1 : 5)



Dett. / Detail **"D1"**
(1 : 2)





Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

EL.	DESCRIPTION	DESCRIPTION ADDITIONAL	Q.TY	WEIGHT
2	Metal profile	Square bar 22x22 - S 355 J2 UNI EN 10025_Cert. 3.1	15	1,52 kg
1	Metal profile	L-profile 70x50x6 - S 355 J2 UNI EN 10025_Cert. 3.1	2	22,81 kg

Eliminare spigoli vivi
Remove all edges

Simboli saldatura secondo
Welding symbols according to
UNI EN ISO 2553

SALDATURA CONTINUA
CONTINUOUS WELDING

UNI EN ISO 8501-3

Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali
Preparation grade of welds, edges and other areas with surface imperfections

Zona *Areas*	Grado *Grade*	R min *Min radius*
Saldature *Weldes*	P3	N.A.
Bordi *Edges*	P3	2 mm
Aree con imperf. superf. *Areas with surface imperf.*	P3	N.A.

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
A	07/10/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

REMAZEL ENGINEERING
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e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment :
C09-0001

Weight :
68,3 kg

Title :
Scala
Ladder

Scale :
1 : 20

Sheet :
1 of 2

A3

Drawing State:
Released
FOR CONSTRUCTION

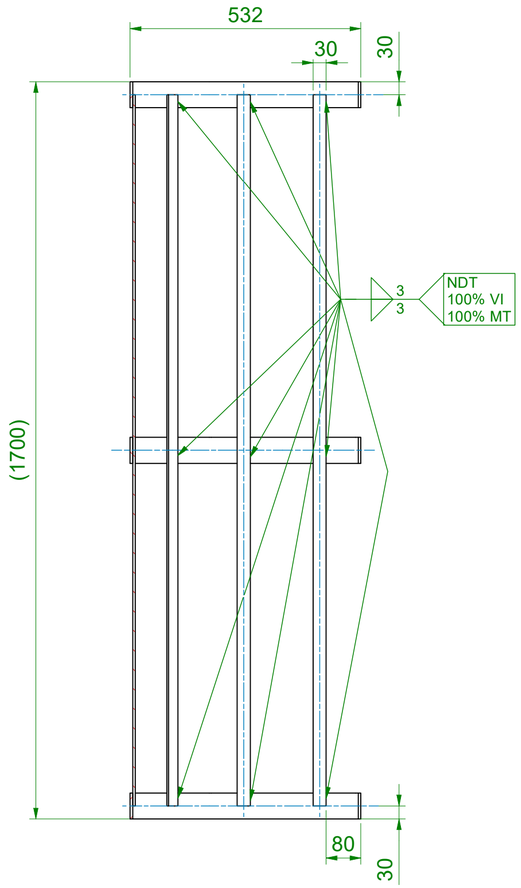
Q.C.L. :
C3

Drawing N° :
C09-0001-P0008

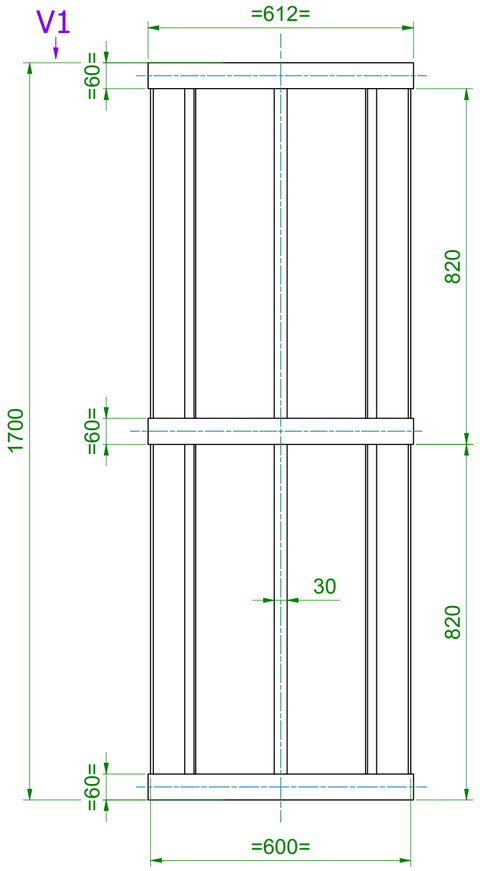
Revision :
A

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Sez. / Sec. **"S1-S1"**
(1 : 10)

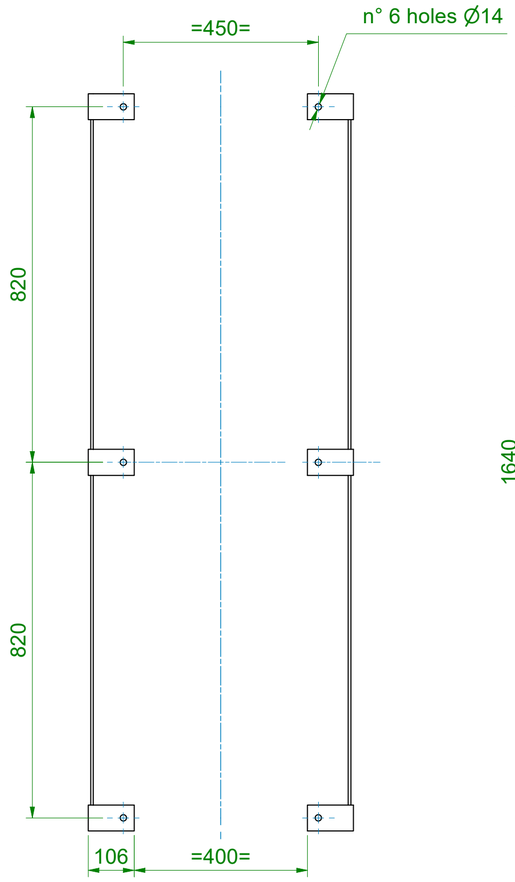


S1

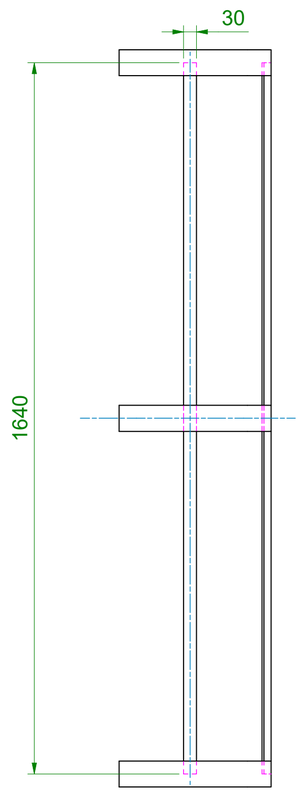


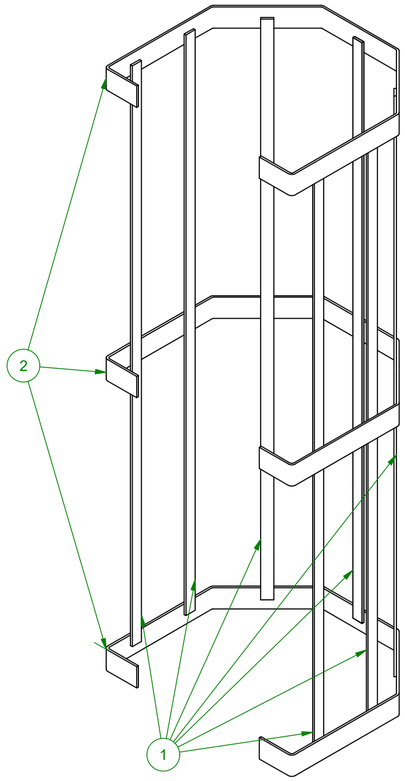
S1

Sez. / Sec. **"S2-S2"**
(1 : 10)

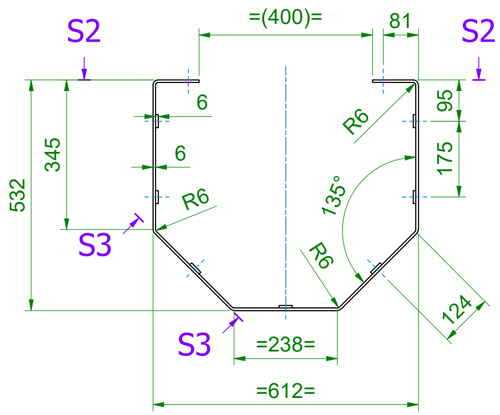


Sez. / Sec. **"S3-S3"**
(1 : 10)





Vista da / View from **"V1"**
(1 : 10)



1	Sheet metal	Thk = 6 mm - S 355 J2 UNI EN 10025_Cert. 3.1	8	2,32 kg
2	Sheet metal	Thk = 6 mm - S 355 J2 UNI EN 10025_Cert. 3.1	3	4,65 kg
EL.	DESCRIPTION	ADDITIONAL DESCRIPTION	Q.TY	WEIGHT

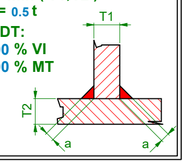
UNI EN ISO 8501-3

Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali
Preparation grade of welds, edges and other areas with surface imperfections

Zona *Areas*	Grado *Grade*	R min *Min radius*
Saldature *Weldes*	P3	N.A.
Bordi *Edges*	P3	2 mm
Aree con imperf. superf. *Areas with surface imperf.*	P3	N.A.

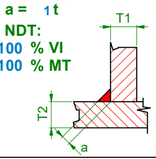
SALDATURE NON QUOTATE *WELD WITHOUT DIMENSION*

Sui due lati / *Both side*
t = min (T1;T2)
a = 0.5 t
NDT:
100 % VI
100 % MT



SALDATURE NON QUOTATE *WELD WITHOUT DIMENSION*

Su un lato / *One side*
t = min (T1;T2)
a = 1 t
NDT:
100 % VI
100 % MT



Eliminare spigoli vivi
Remove all edges

Simboli saldatura secondo
Welding symbols according to
UNI EN ISO 2553

SALDATURA CONTINUA
CONTINUOUS WELDING

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

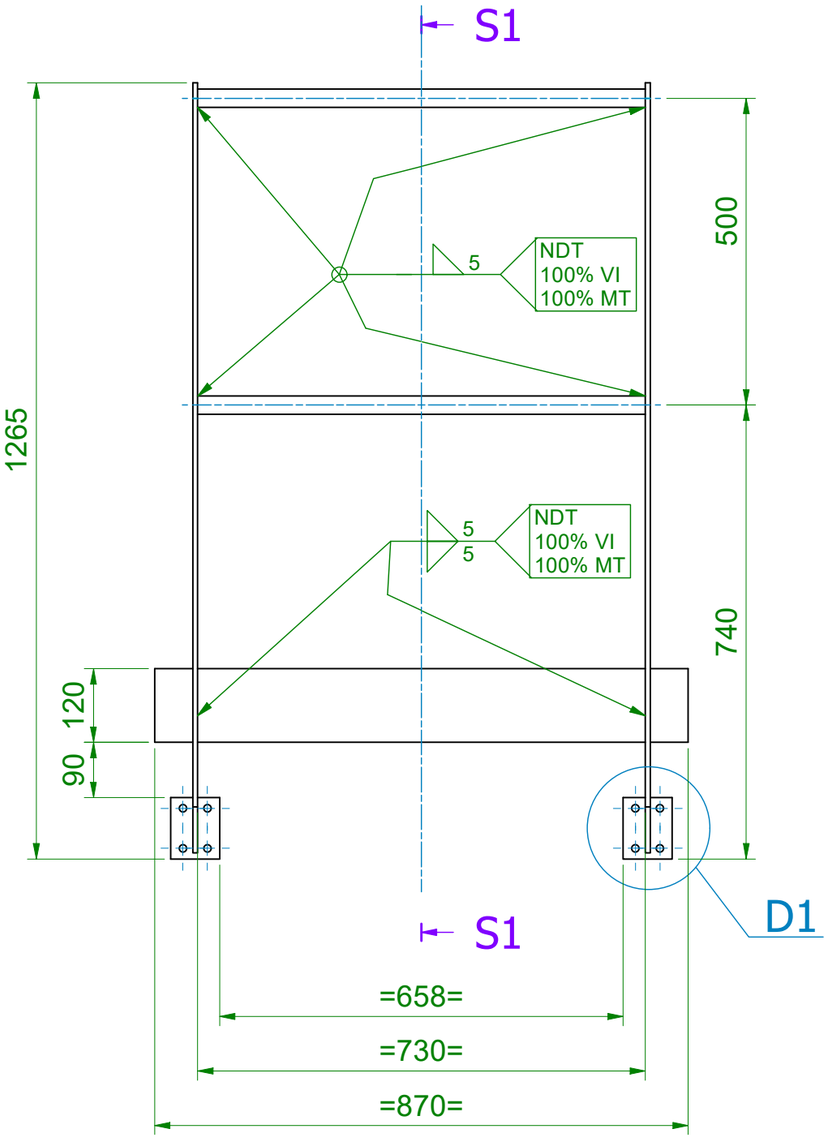
Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
N.A.	Specifica di Distensione / *Stress Relieving Specification*
N.A.	Specifica Trattamento Termico / *Heat Treatment Specification*

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
A	07/10/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

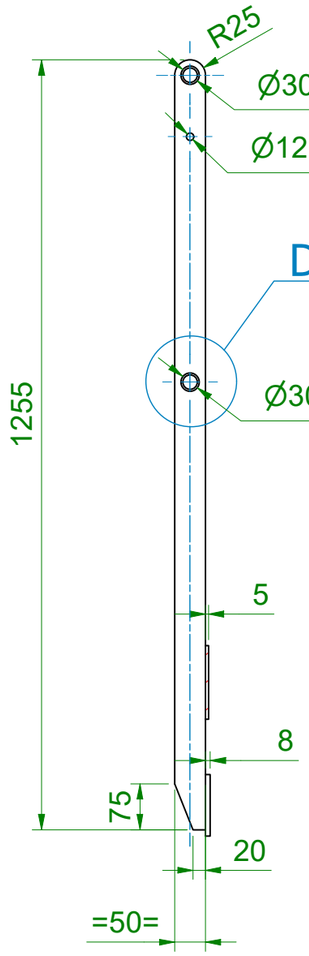
REMAZEL ENGINEERING
Chiuduno (BG) - 24060 - ITALY
Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**
Weight : 32,5 kg
Title : Carpenteria Gabbia Scala / Cage Ladder Carpentry
Scale : 1 : 10
Sheet : 1 of 2 **A2**
Drawing State: **Released** / ***FOR CONSTRUCTION***
Q.C.L. : C3
Drawing N° : C09-0001-P0010
Revision : A

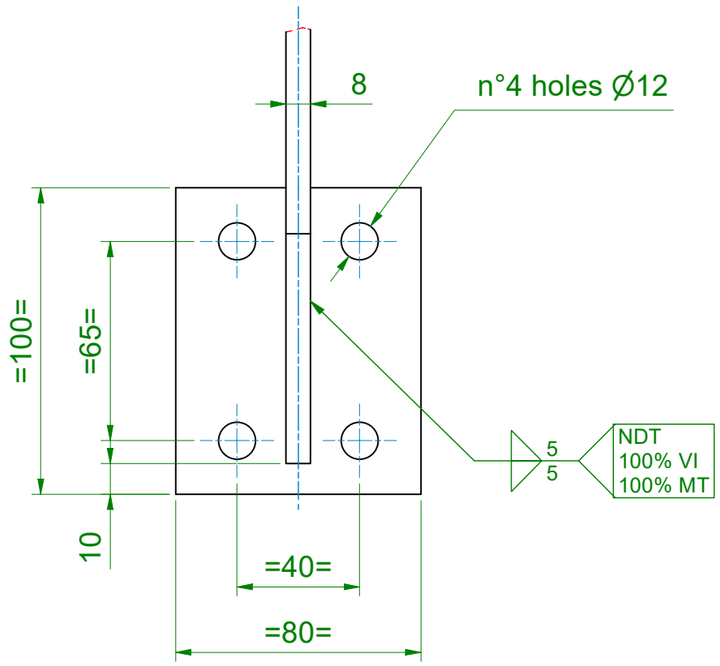
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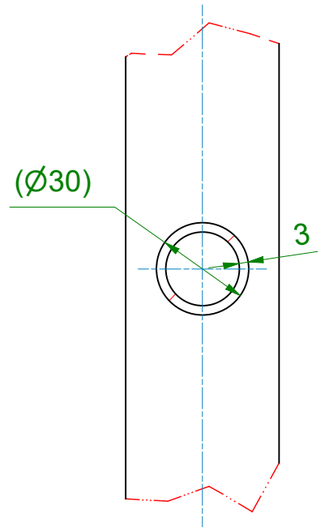
Sez. / Sec. **"S1-S1"**
(1 : 10)

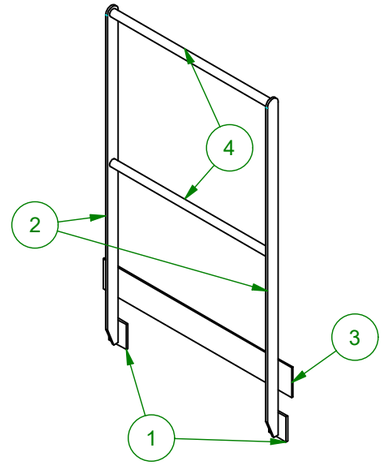


Dett. / Detail **"D1"**
(1 : 2)



Dett. / Detail **"D2"**
(1 : 2)





EL.	DESCRIPTION	DESCRIPTION ADDITIONAL	Q.TY	WEIGHT
4	Metal profile	Round tube Ø30x3 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	1,46 kg
3	Sheet metal	Thk = 5 mm - S 355 J2 UNI EN 10025_Cert. 3.1	1	4,1 kg
2	Sheet metal	Thk = 8 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	4,17 kg
1	Sheet metal	Thk = 8 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	0,5 kg

UNI EN ISO 8501-3

Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali

Preparation grade of welds, edges and other areas with surface imperfections

Zona *Areas*	Grado *Grade*	R min *Min radius*
Saldature *Welds*	P2	N.A.
Bordi *Edges*	P3	2 mm
Aree con imperf. superf. *Areas with surface imperf.*	P3	N.A.

Simboli saldatura secondo *Welding symbols according to* **UNI EN ISO 2553**

SALDATURA CONTINUA *CONTINUOUS WELDING*

Eliminare spigoli vivi *Remove all edges*

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
A	07/10/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

GRADO DI PRECISIONE PER GIUNTI LINEARI E ANGOLARI NON TOLLERATI
TOLERANCE GRADE FOR LINEAR AND ANGULAR JOINTS NOT TOLERATED
LAVORAZIONI MECCANICHE / *MECHANICALS MACHININGS*
Lineari-Angolari / Linear-Angular : UNI EN 22768/1-1996 - m
Generiche / Generals : UNI EN 22768/2-1996 - L
CARPENTERIA / *WELDING STRUCTURE* : UNI EN ISO 13920/2000 - A
Lineari-Angolari / Linear-Angular : UNI EN ISO 13920/2000 - A
Generiche / Generals : UNI EN ISO 13920/2000 - E

REMAZEL ENGINEERING

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Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**

Weight : 15,7 kg

Title : Parapetto 1 / Handrail 1

Scale : 1 : 10

Sheet : 1 of 3 **A3**

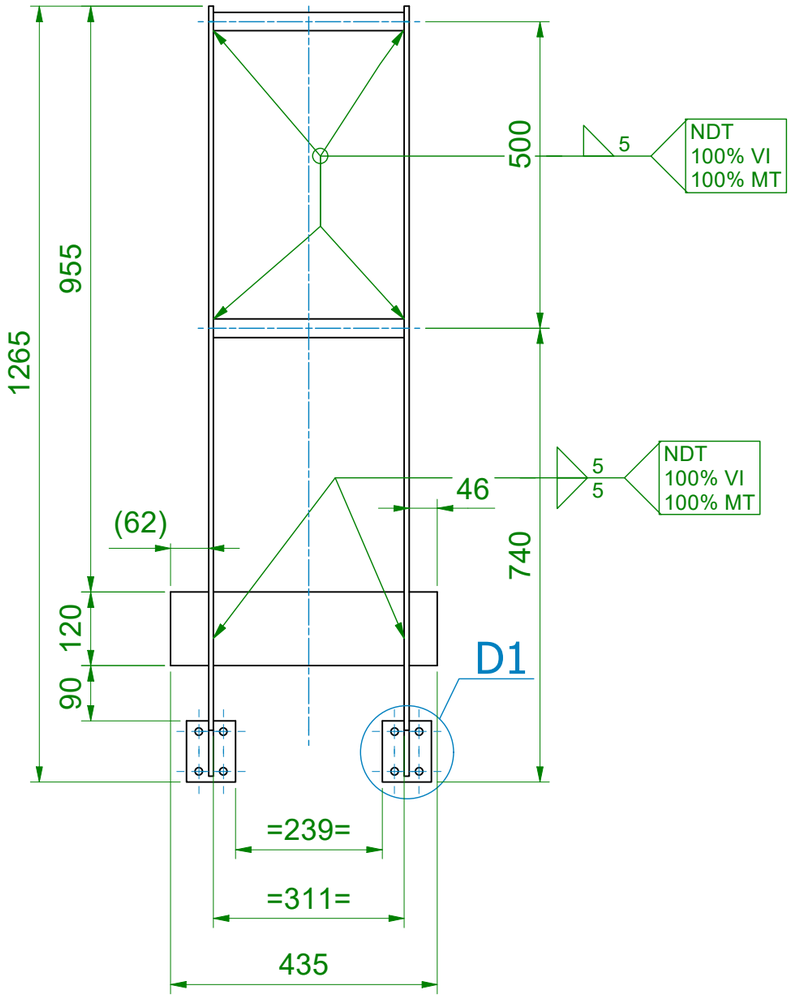
Drawing State: **Released** *FOR CONSTRUCTION*

Q.C.L. : C3

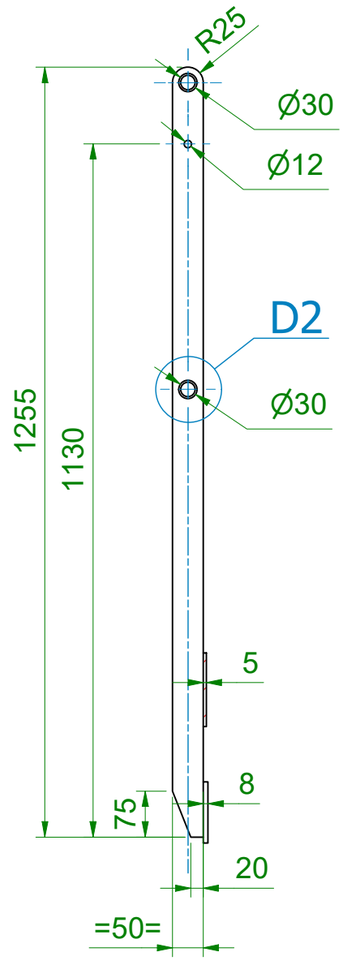
Drawing N° : C09-0001-P0074

Revision : A

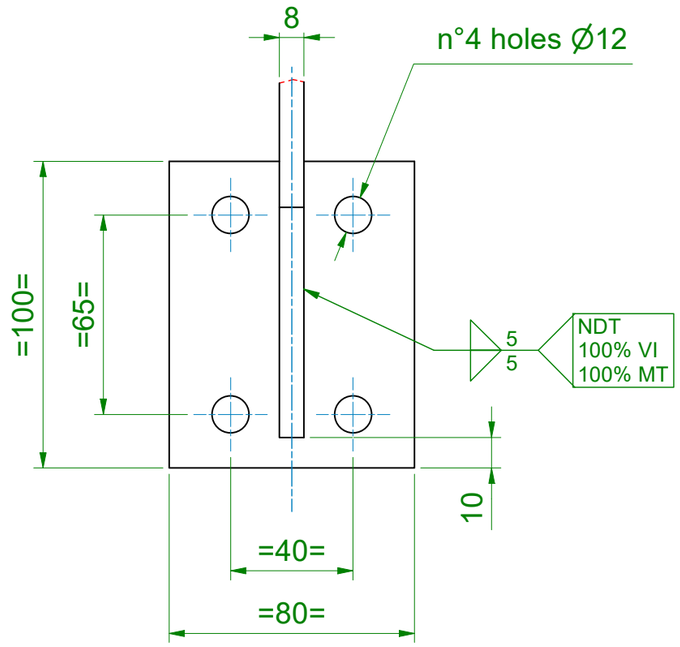
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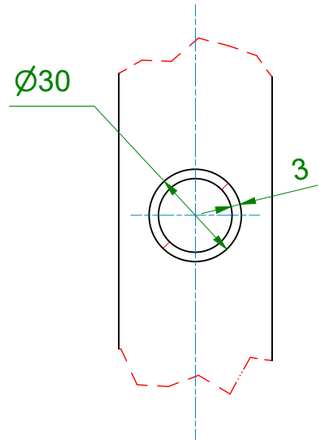
Sez. / Sec. **"S1-S1"**
(1 : 10)

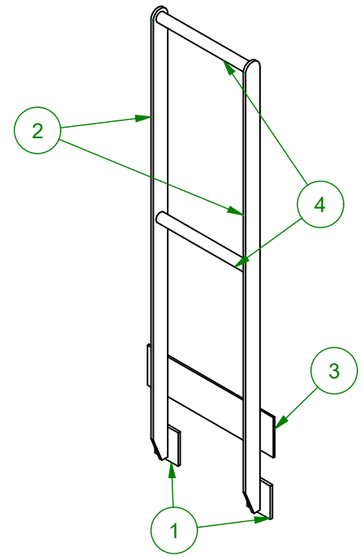


Dett. / Detail **"D1"**
(1 : 2)



Dett. / Detail **"D2"**
(1 : 2)





EL.	DESCRIPTION	DESCRIPTION ADDITIONAL	Q.TY	WEIGHT
4	Metal profile	Round tube Ø30x3 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	0,62 kg
3	Sheet metal	Thk = 5 mm - S 355 J2 UNI EN 10025_Cert. 3.1	1	2,05 kg
2	Sheet metal	Thk = 8 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	4,17 kg
1	Sheet metal	Thk = 8 mm - S 355 J2 UNI EN 10025_Cert. 3.1	2	0,5 kg

UNI EN ISO 8501-3

Grado di preparazione saldature, bordi e altre aree con imperfezioni superficiali

Preparation grade of welds, edges and other areas with surface imperfections

Zona *Areas*	Grado *Grade*	R min *Min radius*
Saldature *Weldes*	P2	N.A.
Bordi *Edges*	P3	2 mm
Aree con imperf. superf. *Areas with surface imperf.*	P3	N.A.

Simboli saldatura secondo *Welding symbols according to* **UNI EN ISO 2553**

SALDATURA CONTINUA *CONTINUOUS WELDING*

Eliminare spigoli vivi *Remove all edges*

Riferimenti documenti per Costruzione / Verniciatura / Controllo
Reference documents for Construction / Painting / Inspections

Numero Documento / *Documents number*	Descrizione / *Description*
1724001010-QC-ITP-00002	Piano di collaudo / *Inspection Test Plan*
1724001010-MAT-PRO-00007	Specifica di Verniciatura / *Painting Specification*
	Specifica di Distensione / *Stress Relieving Specification*
	Specifica Trattamento Termico / *Heat Treatment Specification*

REV	DATE	DESCRIPTION	DRAFTMAN	DESIGNER	CALCULATION ENG.	P.E.
A	07/10/2024	Prima emissione / First issued	riccardo.sobani	Sobani R.	De Fazio F.	–

GRADO DI PRECISIONE PER QUOTE LINEARI E ANGOLARI NON TOLLERATE / *GENERAL TOLERANCES FOR LINEAR AND ANGULAR DIMENSIONS*
LAVORAZIONI MECCANICHE / *MECHANICALS MACHININGS*
L'esecuzione / *Execution* : UNI EN 22768/1-1996 - m
L'esecuzione / *Execution* : UNI EN 22768/2-1996 - L
CARPENTERIA / *WELDING STRUCTURE*
L'esecuzione / *Execution* : UNI EN ISO 13920/2000 - A
Esecuzione / *Execution* : UNI EN ISO 13920/2001 - E

REMAZEL ENGINEERING

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Phone : +39-035-68.44.14 - Fax : +39-035-68.78.23
e-mail : info@remazel.com / website : www.remazel.com

Project / Equipment : **C09-0001**

Weight : 11,9 kg

Title : Parapetto 2 / Handrail 2

Scale : 1 : 10

Sheet : 1 of 3 **A3**

Drawing State: **Released** / ***FOR CONSTRUCTION***

Q.C.L. : C3

Drawing N° : C09-0001-P0075

Revision : A

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Test Certificate

Certificat d'essai • Testzertifikat

elcometer®
www.elcometer.com

Certificate Number:
Numéro de Certificat:
Bescheinigungsnummer: 456-ZM13936-G

Instrument Part Number:
Code Article d'instrument:
Artikelnummer des Geräts: A456CFNFSS

Instrument Type:
Instrument Modèle:
Gerätetyp: Elcometer 456 Model S Dual FNF Separate
Elcometer 456 Modèle S Dual FNF à sonde séparée
Elcometer 456 Modell S mit separater Kombi-Sonde für Eisen und Nicht-Eisen (FNF)

Instrument Serial Number:
Instrument Numéro de Série:
Seriennummer des Geräts: ZM13936

Instrument PCB Serial Number:
Circuit Imprimé Numéro de Série:
Seriennummer der Leiterplatte: ZK23689-000

Measurement Date:
Date de Mesure:
Maß-datum: 03/01/2024

The instrument was calibrated using factory reference probe Serial Number UH11036 using a smooth calibration, with the factory zero plate and the thickest certified foil listed below in accordance with Elcometer's Certification Procedure.

L'instrument a été étalonné à l'aide d'un étalonnage lisse, en utilisant une Sonde de référance UH11036, une plaque zéro et la feuille d'étalonnage certifiée la plus épaisse qui sont énumérés ci-dessous, selon les Procédures d'Etalonnage d'Elcometer.

Das Gerät wurde mit einer Referenz-Sonde (Seriennummer UH11036) nach einer glatten Kalibriermethode kalibriert, durch Einsetzen einer Nullplatte und die dickste zertifizierter Folie, die unten aufgelistet ist. Die Kalibriermethode wurde gemäß Elcometer's Zertifizierungsprotokolls durchgeführt

Measurement Results: Ferrous • Resultats de Mesure: Ferreux • Messergebnisse: Eisenmetall

Foil / Substrate[1] Feuille d'Etalonnage / Substrat[1] Folie / Untergrund[1]			Actual Measured Value[1] Valeur mesurée exacte[1] Aktuelle Messwert[1]		Allowable Value[1] Valeur admissible[1] Zulässigen Wert[1]			
Value • Valeur • Wert		Serial Number[2] Numéro de Série[2] Seriennummer[2]						
µm	mils		µm	mils		µm	mils	
1488.0	58.58	UG13148	1487.0	58.54	±1%	1473.1 - 1502.9	58.00 - 59.17	Pass • Réussi • Bestanden
749.0	29.49	XL20243	751.7	29.59	±3%	726.5 - 771.5	28.60 - 30.37	Pass • Réussi • Bestanden
0.0	0.00	XC28006	0.0	0.00	±1µm	-1.0 - 1.0	-0.04 - 0.04	Pass • Réussi • Bestanden

Measurement Results: Non Ferrous • Resultats de Mesure: Non-Ferreux • Messergebnisse: Nichteisenmetall

Foil / Substrate[1] Feuille d'Etalonnage / Substrat[1] Folie / Untergrund[1]			Actual Measured Value[1] Valeur mesurée exacte[1] Aktuelle Messwert[1]		Allowable Value[1] Valeur admissible[1] Zulässigen Wert[1]			
Value • Valeur • Wert		Serial Number[2] Numéro de Série[2] Seriennummer[2]						
µm	mils		µm	mils		µm	mils	
1488.0	58.58	UG13148	1488.6	58.61	±1%	1473.1 - 1502.9	58.00 - 59.17	Pass • Réussi • Bestanden
749.0	29.49	XL20243	752.2	29.61	±3%	726.5 - 771.5	28.60 - 30.37	Pass • Réussi • Bestanden
0.0	0.00	YA00779	-0.1	0.00	±1µm	-1.0 - 1.0	-0.04 - 0.04	Pass • Réussi • Bestanden

Signed on behalf of Elcometer Limited • Signé au nom d'Elcometer Limited • Unterzeichnet im Namen Elcometer Limited

Name:
Nom:
Name: A. Smith

Quality Manager • Responsable Qualité • Qualitätsbetriebsleiter

[1] Measurements taken in microns, mils values are calculated using 1µm = 0.03937mil
[1] Les valeurs sont prises en microns. Les valeurs en 'mils' sont calculées en utilisant 1µm = 0.03937mil
[1] Messwerte sind in Microns gezeigt. Um auf „mils" umzurechnen, benutzen Sie 1µm = 0.03937mil
[2] Certificate Number: 55613
[2] Numéro de Certificat: 55613
[2] Bescheinigungsnummer: 55613

ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-006	SHEET 1 of 8
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Test Coupon For Pull-Off test*	

DESCRIZIONE DEL MATERIALE / *Material Description*

POS. *Item*	**QUANTITA'** *Quantity*	**DESCRIZIONE** *Description*	**Nr. TAG** *TAG No.*	**TIPO DI ISPEZIONE** / *Kind of Inspection*	**ESITO** / *Result*
1	2	Test Coupon	----------	Pull-Off Test	**Satisfactory**

DOCUMENTI APPLICABILI / *Applicable Documents*

TITOLO DOCUMENTO / *Document Title*	**NUMERO DOCUMENTO** / *Document Number*	**REVISIONE** / *Revision*	**STATO DOCUMENTO** / *Document Status*
INSPECTION AND TEST PLAN – Davit Crane	1724001010-QC-ITP-00002	03	AFC
PAINTING PROCEDURES - Davit Crane	1724001010-MAT-PRO-00007	04	AFC

Remarks: None.

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 out 16/12/2024 at Remazel SpA factory, located in Via Giovanni e Sebastiano Caboto 26 – 34148 Trieste (TS) , ITALY.
The following inspection activities were witnessed by Rosetti Marino and Crosswind as specified in the Notification of Inspection (Noi Nr. 11 Rev.0 of 04-12-2024) and in accordance with ITP (STEP 7.04) and Factory acceptance test procedure.
Attendees the test:
Michele Sacchi (Rosetti Marino QC Coating Inspector)
Matteo Biancolillo (SeaMetal QC Coating Inspector)
Carlo Ziber (Remazel Enginering QC Dep.)
Marzio Mederici (behalf for Crosswind)
Area of concern
None

B –SCOPO DELL'ISPEZIONE / *Scope of Inspection*

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35424		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
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ROSETTI MARINO	**INSPECTION REPORT**	**Report No.** IR-REM-1010-006	SHEET 2 of 8
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Test Coupon For Pull-Off test*	

DESCRIZIONE DEI TEST PRESENZIATI / *Description of witnessed tests*	**ESITO /** *Result*
As per Inspection Notification follow the activities: • Pull-Off test as per ISO 4624 Item (Pedestal Crane; Boom; Trolley)	**Satisfactory**

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*
Positector	**Defelsko**	**Positector AT-A Serial Number AT10520**	**21-10-2025**

Remarks:
None.

D –ALLEGATI / *Attachments (***CERTIFICATI E TEST REPORT** */ Certificates and Test Reports)*

NUMERO DOCUMENTO / *Document Number*	**DESCRIZIONE** / *Description*	**TIPO** / *Type*	**NR. PAGINE** / *No. Pages*
11180/24	Certificate of Calibration	Certificate	2

Remarks:
None.

E – DETTAGLI ED ESITO DELL'ISPEZIONE */ Details and Results of Inspection*

All details has been highlighted in the test reports.

F – CONCLUSIONI */ Conclusions*

Test Activities Carried Out With Positive Results.

G – PUNTI IRRISOLTI */ Outstanding points*

None.

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

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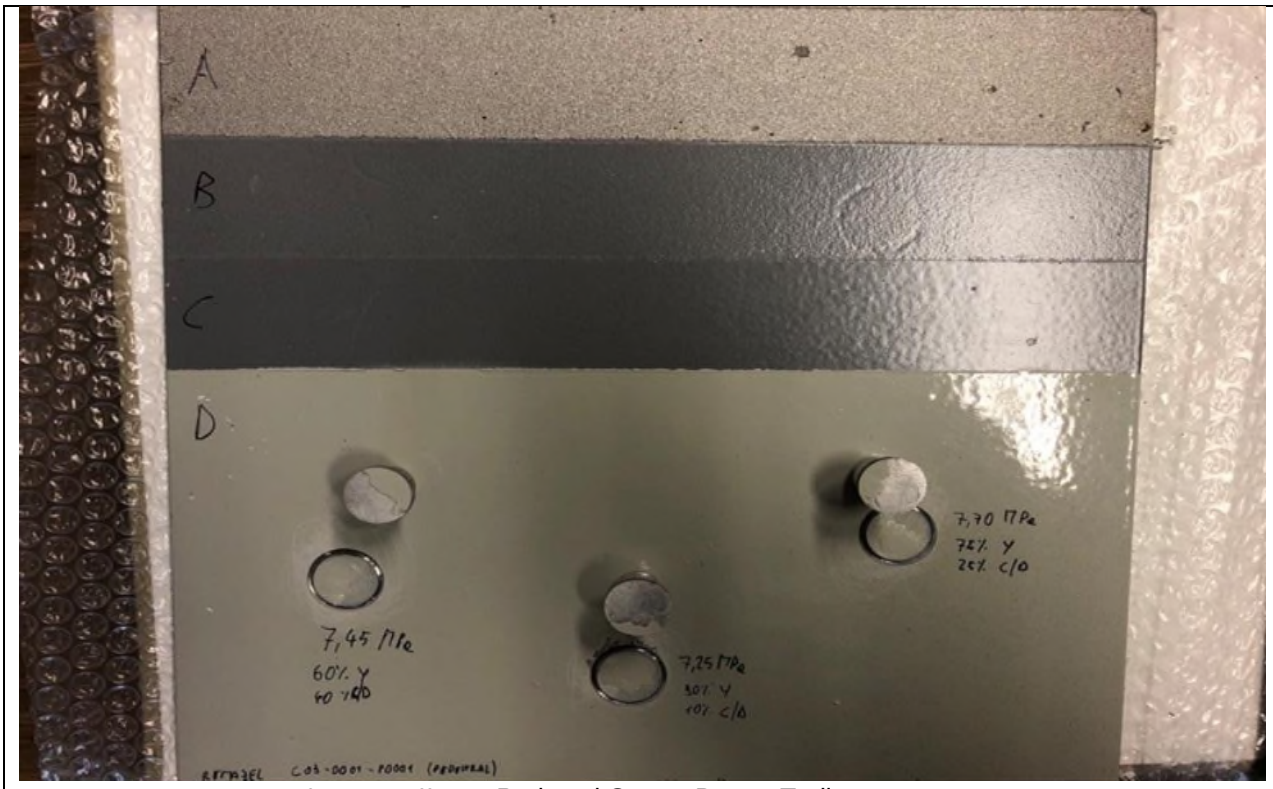
ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-006	SHEET 3 of 8
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Test Coupon For Pull-Off test*	



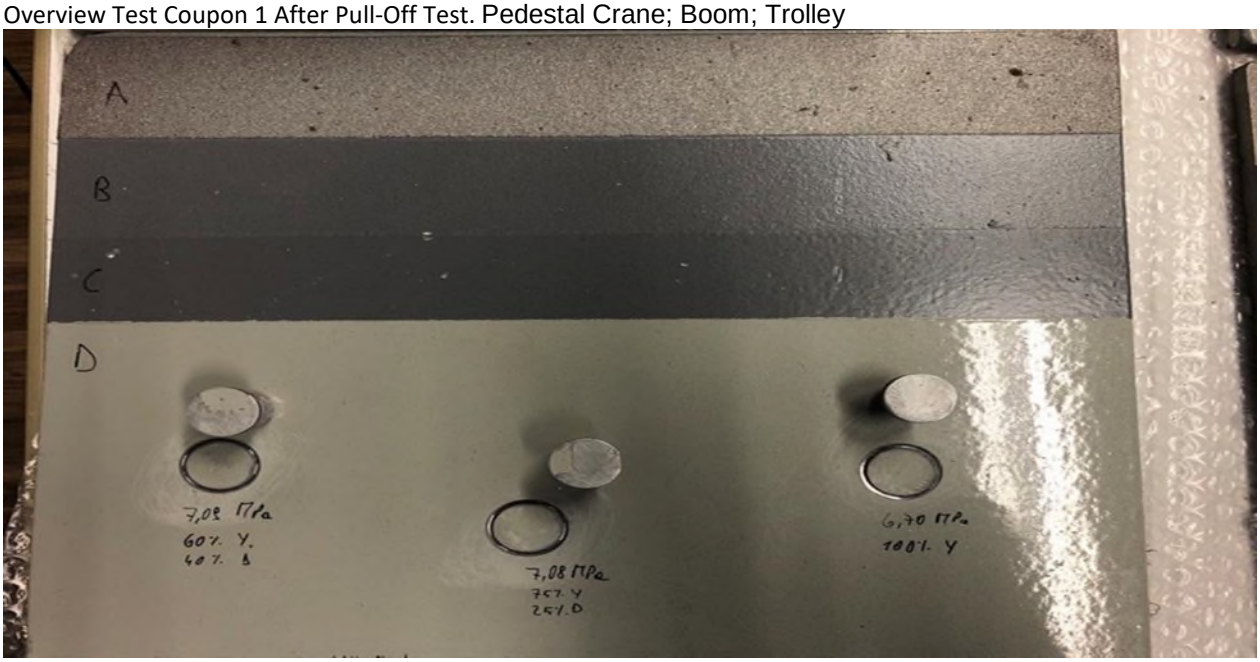
Overview Test Coupon Before Pull-Off Test. Pedestal Crane; Boom; Trolley

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Secchi Quality Control Dept. NACE #35424		

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Overview Test Coupon 1 After Pull-Off Test. Pedestal Crane; Boom; Trolley



Overview Test Coupon 2 After Pull-Off Test. Pedestal Crane; Boom; Trolley

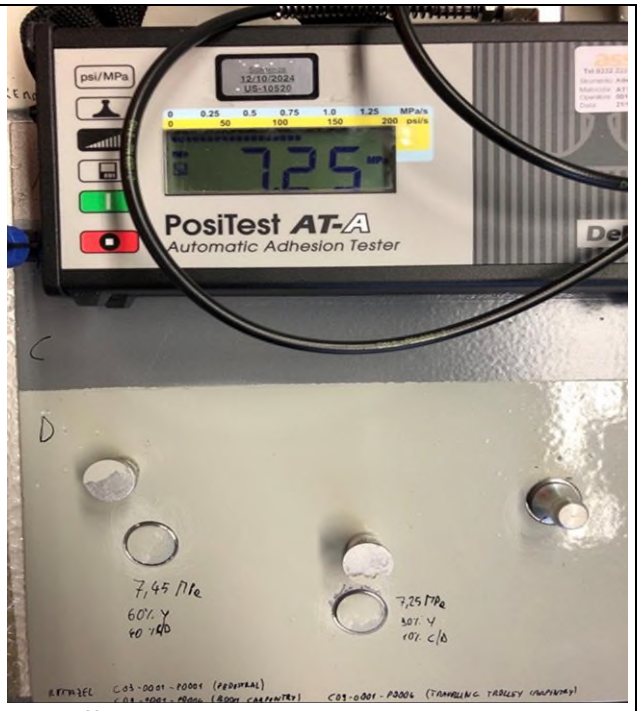
L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Secchi Quality Control Dept. NACE #35424		

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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-006	SHEET 5 of 8
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Test Coupon For Pull-Off test*	



Pull-Off Test Coup1. Dolly 1



Pull-Off Test Coup1. Dolly 2



Pull-Off Test Coup1. Dolly 3



Pull-Off Test Coup2. Dolly 1

L' INCARICATO / *The person in charge*	**IL RAPP. DEL CLIENTE** / *Client's Representative*	**IL FORNITORE** / *Supplier*
ROSETTI MARINO SpA Michele Sacchi Quality Control Dept. NACE #35464		

QUESTO DOCUMENTO NON SOLLEVA IL FORNITORE DALLA RESPONSABILITA' DI EVENTUALI DIFETTI E/O MALFUNZIONAMENTI RILEVATI DURANTE L'USO /
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ROSETTI MARINO	INSPECTION REPORT	Report No. IR-REM-1010-006	SHEET 6 of 8
		Data *Date* 17/12/2024	Rev. *Rev. 0*
PROGETTO *Project* **Base Load Power Hub (BLPH)**	**CLIENTE** *Client* CROSSWIND	**COMMESSA /** *Job* ***123A90***	**COMMESSA FORNITORE** / *Job Vendor* 24-27012
FORNITORE *Supplier: Remazel Engineering*	**No. Ordine** *P.O. No.* **1724001010 Rev.2**	**OGGETTO** *Object Test Coupon For Pull-Off test*	



Pull-Off Test Coup2. Dolly 2



Pull-Off Test Coup2. Dolly 3



Pull-Off Tester

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 SpA Michele Sacchi Quality Control Dept. NACE #35424		

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Fax +39 0332 822553
www.assicontrol.com
e-mail: info@assicontrol.com
C.F. e P.I. 02436670125

STRUMENTI & SERVIZI
per il sistema qualità

Nr. 86990/A/0001/UK/IT
Sistema di Gestione Qualità Assicontrol
certificato secondo la norma ISO 9001:2015

CERTIFICATO DI TARATURA
CERTIFICATE
N° 11180/24

Destinatario: **SEA METAL S.r.l.**
Customer

Oggetto della taratura: **Strumento prova adesione**
Description: adhesion tester

Metodo: verifica mediante celle certificate
Method: verify by certificate stores

Utilizzo: strumento per la verifica del grado di adesione dei riporti.
Use: instrument for the verify of the adhesion grade of the coatings

Modello / *Model:* **AT-A**

Matricola / *s/n:* **AT10520**

Campo di misura / *range:* **0,7 - 24 MPa**

Indicazione / *type*: digitale / *digital*

Costruttore / *Manufacturer:* Defelsko

Procedura utilizzata per la verifica: CP017
Procedure

Data: 21-10-24
Date

Intervallo di verifica: 12 mesi
Checking every: 12 months

Esecuzione attività c/o Assicontrol S.r.l.
Activities performed at

Il responsabile di laboratorio: C. Alborghetti
Head of laboratory

firma _____
signature

Procedura di verifica
La procedura utilizzata per effettuare la verifica prevede l'impiego di strumenti e/o campioni primari certificati da centri Accredia o equivalenti riconosciuti a livello internazionale (ove disponibili). Le verifiche vengono effettuate per confronto diretto o indiretto tra lo strumento/campione in taratura e lo strumento/campione di riferimento primario con l'utilizzo delle attrezzature di supporto. Si predispone l'oggetto della verifica e gli strumenti/campioni di confronto pronti ad effettuare misurazioni lasciandoli per circa due ore nella camera di prova a temperatura ed umidità controllate. Si effettuano una serie di misure significative annotandole sulla scheda tecnica interna. Si calcola la media aritmetica degli scostamenti rilevati. Si verifica poi la ripetibilità di lettura. Si determina quindi l'incertezza di misura derivante dagli scostamenti rilevati, dalla ripetibilità di lettura, dall'incertezza degli strumenti e/o campioni utilizzati per la prova, da deriva termica, rumore, ove applicabili. Si determina poi l'esito della verifica o la conformità alla normativa di riferimento, se previsti. Alla fine della compilazione della scheda tecnica interna, può essere redatto il documento di verifica. Si appone infine sullo strumento/campione l'etichetta di avvenuta certificazione.

Procedure of verify.
The procedure used for the verify provides the use of master samples / instruments certificated by Accredia centres or equivalent recognized at international level (where available).
The verifies are effected by direct or in direct comparison between the sample / instrument to calibrate and the master sample / instrument using support equipments.
The object of the verify and the master samples / instruments are arranged to be ready to take measures, they stay in the test room about two hours at controlled temperature and humidity. Some significant measures are taken, and they are annotated on the internal technical-report. The arithmetical mean of the errors, which have been taken, is calculated. Than the reading repeatibility is verified. So the uncertainty of measure is determined, it comes from the: errors, reading repeatibility, uncertainty of the samples / instruments used for the test, thermic deviation, noise, where applicable. Than the result of the verify or the conformity with the reference standard is determined, if they are provided. At the end of the compilation of the internal technical-report, the verify document can be compiled. Finally the label of occurred calibration is affixed on the sample / instrument.

Registro di laboratorio CERT15 *Laboratory registration*	Documento N° 51/10 del 20-10-98 *Document Nr. 51/10 dated 20-10-98*	Rev. 1.00

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SCHEDA TECNICA
TECHNICAL REPORT

Verifica rilevazioni strumento prova adesione con l'utilizzo di campioni primari
Verify of adhesion tester / dynamometer with the use of master samples / instruments
Procedura / *Procedure*: CP030

Modello / *Model:* **AT-A** tipo / *type:* digitale / *digital* Matricola / *s/n:* **AT10520**
campo di misura / *range:* 0,7 – 24 MPa risoluzione / *resolution:* 0,01 MPa

Impostazioni sullo strumento per la taratura / *Instrument setting:* /

La catena di riferibilità ha inizio con i seguenti campioni primari per il confronto indiretto:
Master samples / instruments:
Manometro campione Lab DMM matricola 350-41283 con certificato Accredia nr. P0073 2023.
Sample manometer Lab DMM s/n 350-41283 con certificato Accredia nr. P0073 2023.
Banco di controllo utilizzato per la verifica del campione tipo GPM/2 AEP matricola 35 (401).
Inspection table used for the master verify model GPM/2 AEP Ametek s/n 35 (401).

Prove in trazione / *Traction*

Punto	valore letto su strumento di riferimento *nominal value* (MPa)	valore letto su strumento in taratura *reading value* (MPa)	scostamento dal valore nominale *error* (MPa)
1	2,52	2,50	-0,02
2	5,06	5,00	-0,06
3	8,09	8,00	-0,09
4	10,15	10,00	-0,15
5	16,18	16,00	-0,18
6	22,23	22,00	-0,23
	Incertezza di misura / *Uncertainty of the results*: < ± 0,99 (% v.l.)		

Note: i valori letti sono la media di più misurazioni. Saltuariamente lo strumento non raggiunge la massima pressione di tiraggio.
Notes: readings are the average of several measurements. Occasionally the instrument does not reach the maximum draft pressure.
Considerazioni / *Considerations*: /

Le incertezze di misura dichiarate in questo documento, associate alle letture effettuate, sono espresse come due volte lo scarto tipo corrispondente, nel caso di distribuzione normale, ad un livello di confidenza di circa 95%.
The measurement uncertainties stated in this document, are estimated at a level of twice the standard deviation (corresponding in the case of normal distribution, to a confidence level of about 95%).

Le misure sono state effettuate nelle seguenti condizioni ambientali / *Room test conditions*:
Temperatura / *Temperature*: 23°C ± 1°C
Umidità / *Humidity*: 50% u.r. ± 10% u.r.

Data delle prove *Test date* 21-10-24 Tecnico di laboratorio *Technician of laboratory* _____

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Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE