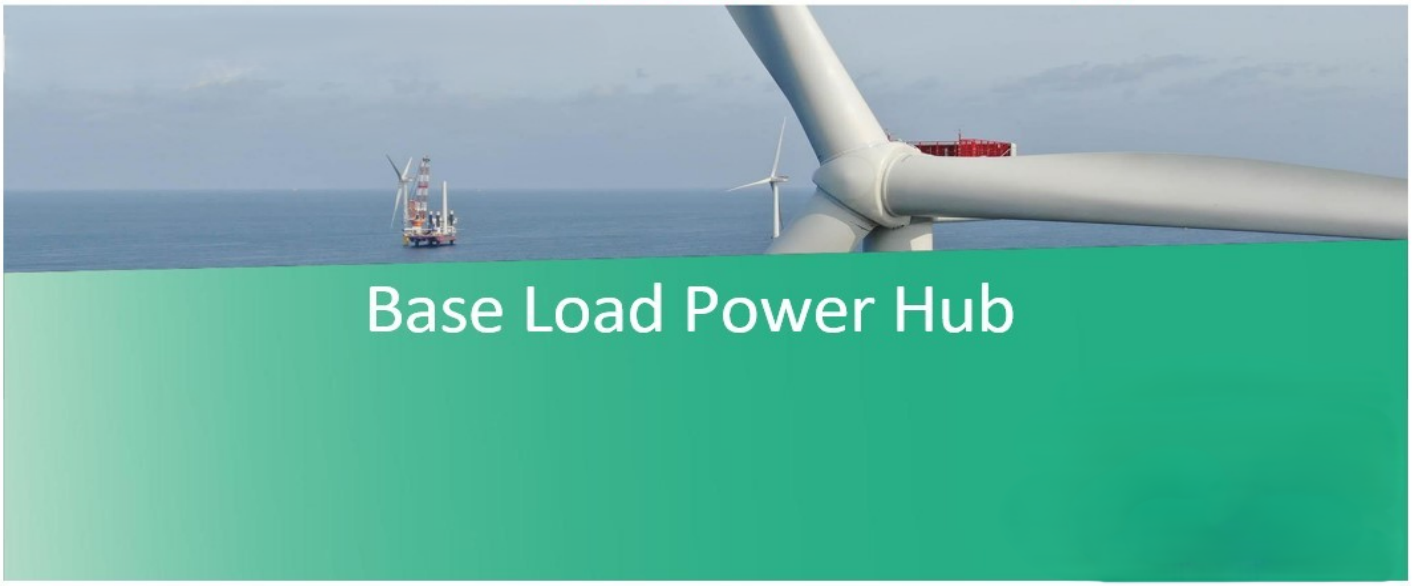
CROSSWIND

ROSETTI MARINO

PROVERLIS

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




# MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM

70
Safety and Facility Systems

SUBSYSTEM

70-00-17

Junction Box 950-JE-05102 and Multi-core cable (FGS System)

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

| Sub System N°: | 70-00-17 | Tick as appropriate | ONSHORE | O |
|---|---|---|---|---|
| Description: | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | | OFFSHORE | NA |

| | | |
|---|---|---|
| 1. | ***READY FOR COMMISSIONING CERTIFICATE***<br>*Ready For Commissioning Certificate (RFC)* | O |
| 2. | ***CONSOLIDATED PUNCH LISTS***<br>*Cleared and Residual Items* | O |
| 3. | ***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS***<br>*Mark-up drawings showing the limits of the relevant System/Sub-System* | NA |
| 4. | ***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE***<br>*Building Sub-System Status Index (Print out) and Check/Test sheets* | NA |
| 5. | ***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE***<br>*Electrical Sub-System Status Index (Print out) and Check/Test Sheets*<br>*Hazardous Area Equipment Detailed Inspection* | NA |
| 6. | ***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE***<br>*Instrumental Sub-System Status Index (Print out) and Check/Test Sheets* | O |
| 7. | ***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE***<br>*Mechanical SubSystem Status Index (Print out) and Check/Test Sheets* | NA |
| 8. | ***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE***<br>*Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 9. | ***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE***<br>*HVAC Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 10. | ***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE***<br>*Piping Sub-System Status Index and Check/Test Sheets* | NA |
| 11. | ***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE***<br>*Safety Sub-System Status Index (Print out) and Check/Test Sheets* | NA |
| 12. | ***FAT / VENDOR REPORTS***<br>*Fat reports issued by vendors and/or vendor reports* | NA |
| 13. | ***MECHANICAL COMPLETION CHANGES / MARK-UPS***<br>*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: | 2024-12-07 | |
| System: | 70 | / | Safety and Facility Systems | | |
| SubSystem: | 70-00-17 | / | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | | |

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

| PUNCH LIST | PENDING POINTS | |
|---|---|---|
| **Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate** | A | B |
| | '0 | 6 |

**REMARKS:**

| | **CONTRACTOR** Construction Manager | **CONTRACTOR** Commissioning Manager | **COMPANY** Construction Lead (if required) | **COMPANY** Commissioning Lead (if required) |
|---|---|---|---|---|
| Name | Wolmer Borghi | Kristian Castellani | CPY NOT PRESENT | CPY NOT PRESENT |
| Date | 2024-12-10 | 2024-12-10 | 2024-12-10 | 2024-12-10 |
| Signature | PROVERLIS Digitaly signed by Wolmer Borghi 2024-12-10T12:05:33.933Z | PROVERLIS Digitaly signed by Kristian Castellani 2024-12-10T08:17:07.496Z | PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-10T12:10:12.803Z | PROVERLIS Digitaly signed by CPY NOT PRESEN 2024-12-10T12:10:24.361Z |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-17 & process: MC

| Instrumental | 70-00-17 Junction Box 950-JE-05102 and Multi-core cable (FGS System) | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| 950-JE-05102 | DI JB TO FGS | ONSHORE | C10002187 | CJX31 | 100 | 2024-12-03 | RFC 1 |
| 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | ONSHORE | C10002188 | CJX10 | 100 | 2024-11-25 | RFC 1 |

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 70 Safety and Facility Systems

SUBSYSTEM 70-00-17 Junction Box 950-JE-05102 and Multi-core cable (FGS System)

Instrumental

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30001153 | A | 950-JE-05102 C10002187 | Missing earthing jumper from the door to (950-JE-05102). | . | | Gtangianu 2024-12-03 | 2024-12-07 | Ecarotenuto 2024-12-07 | 2024-12-07 |
| C30000896 | B | 950-JE-05102/B 400-FGS-003 C10002188 | 2) Missing in the wiring diagrams (12390-DDLIN-DG-40016_rev 1_K -sh 46) the jumper bar connected to all "SH" and | . | | Gtangianu 2024-11-25 | | | |
| C30000897 | B | 950-JE-05102/B 400-FGS-003 C10002188 | """Identification tag wires missing sideB400-FGS-003 and tag wires is wrong side 950-JE-05102 connection. | . | | Gtangianu 2024-11-25 | | | |
| C30000899 | B | 950-JE-05102/B 400-FGS-003 C10002188 | "Missing cable tags on all routing ,and inside the panel ( 950-JE-05102/B400-FGS-003). "" " | . | | Gtangianu 2024-11-25 | | | |
| C30000904 | B | 950-JE-05102/B 400-FGS-003 C10002188 | All shield are not connected ,for missing free terminal shield on bar side B400-FGS-003. | . | | Gtangianu 2024-11-25 | | | |
| C30000909 | B | 950-JE-05102/B 400-FGS-003 C10002188 | cabletray are not completed below the 950-JE-05102. | . | | Gtangianu 2024-11-25 | | | |
| C30001154 | B | 950-JE-05102 C10002187 | Missing plugs on the 950-JE-05102) | . | | Gtangianu 2024-12-03 | | | |

# Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

PUNCH LIST REPORT

| | | |
|---|---|---|
| SYSTEM | 70 | Safety and Facility Systems |
| SUBSYSTEM | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) |

Instrumental

| CODE | CAT | ITEM | DEFECT DESCRIPTION | CORRECTIVE ACTION | PERFORMED ACTION | ISSUED | CARRIED | CHECKED | APPROVED |
|---|---|---|---|---|---|---|---|---|---|
| C30001153 | A | 950-JE-05102 C10002187 | Missing earthing jumper from the door to (950-JE-05102). | . | | Gtangianu 2024-12-03 | 2024-12-07 | Ecarotenuto 2024-12-07 | 2024-12-07 |
| C30000896 | B | 950-JE-05102/B 400-FGS-003 C10002188 | 2) Missing in the wiring diagrams (12390-DDLIN-DG-40016_rev 1_K -sh 46) the jumper bar connected to all "SH" and | . | | Gtangianu 2024-11-25 | 2024-12-14 | Ecarotenuto 2024-12-14 | 2024-12-14 |
| C30000897 | B | 950-JE-05102/B 400-FGS-003 C10002188 | """Identification tag wires missing sideB400-FGS-003 and tag wires is wrong side 950-JE-05102 connection. | . | | Gtangianu 2024-11-25 | 2025-04-08 | Gtangianu 2025-04-08 | 2025-04-08 |
| C30000899 | B | 950-JE-05102/B 400-FGS-003 C10002188 | "Missing cable tags on all routing ,and inside the panel ( 950-JE-05102/B400-FGS-003). "" " | . | | Gtangianu 2024-11-25 | 2025-02-26 | Pschintu 2025-02-26 | 2025-02-26 |
| C30000904 | B | 950-JE-05102/B 400-FGS-003 C10002188 | All shield are not connected ,for missing free terminal shield on bar side B400-FGS-003. | . | | Gtangianu 2024-11-25 | 2025-02-27 | AAndreani 2025-02-27 | 2025-02-27 |
| C30000909 | B | 950-JE-05102/B 400-FGS-003 C10002188 | cabletray are not completed below the 950-JE-05102. | . | | Gtangianu 2024-11-25 | 2025-01-31 | Gtangianu 2025-01-31 | 2025-01-31 |
| C30001154 | B | 950-JE-05102 C10002187 | Missing plugs on the 950-JE-05102) | . | | Gtangianu 2024-12-03 | 2024-12-30 | Gtangianu 2024-12-30 | 2024-12-30 |

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30001154

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002187 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102 | DI JB TO FGS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

Missing plugs on the 950-JE-05102)

Name: Giovanni Tangianu

Date: 2024-12-03

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-12-03 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2024-12-30

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000896

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002188 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

2) Missing in the wiring diagrams (12390-DDLIN-DG-40016_rev 1_K -sh 46) the jumper bar connected to all "SH" and "SHT"terminal.

Name: Giovanni Tangianu
Date: 2024-11-25
Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-11-25 |
| 3.5 Action by | ENG Engineering | Signature | |

## 4 - PERFORMED ACTION

Name:
Date:
Signature:

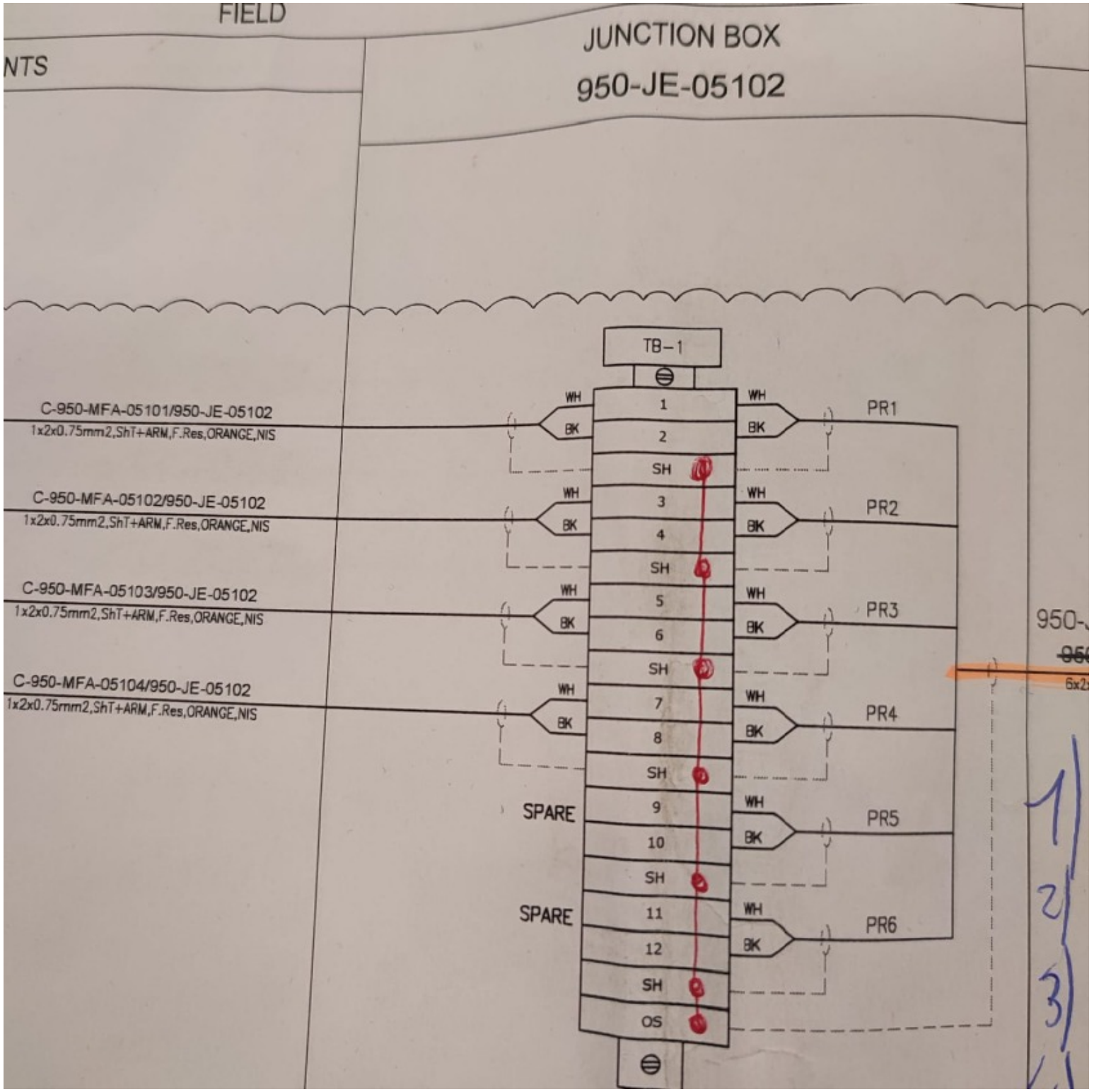
## 5 - CLEARANCE CHECK

RLMU done

Name: Eleonora Carotenuto
Date: 2024-12-14
Signature:

## 6- CLEARANCE APPROVAL

Name:
Date:
Signature:


FIELD
NTS
JUNCTION BOX
950-JE-05102
TB-1
C-950-MFA-05101/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS
C-950-MFA-05102/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS
C-950-MFA-05103/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS
C-950-MFA-05104/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS
WH
BK
1
2
SH
3
4
SH
5
6
SH
7
8
SH
SPARE
9
10
SH
SPARE
11
12
SH
OS
PR1
PR2
PR3
PR4
PR5
PR6

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000897

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002188 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

"""Identification tag wires missing sideB400-FGS-003 and tag wires is wrong side 950-JE-05102 connection.

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-11-25 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name

Date

Signature

## 5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-04-08

Signature

## 6- CLEARANCE APPROVAL

Name

Date

Signature

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000899

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002188 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

"Missing cable tags on all routing ,and inside the panel ( 950-JE-05102/B400-FGS-003).
""
"

Name: Giovanni Tangianu
Date: 2024-11-25
Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-11-25 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:
Date:
Signature:

## 5 - CLEARANCE CHECK

DONE

Name: Paolo Schintu
Date: 2025-02-26
Signature:

## 6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000904

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002188 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

All shield are not connected ,for missing free terminal  shield on bar side B400-FGS-003.

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-11-25 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED  ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-27

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30000909

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002188 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

cabletray are not completed below the 950-JE-05102.

Name: Giovanni Tangianu

Date: 2024-11-25

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | B PL B | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-11-25 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

Cabletray is installed.

Name: Giovanni Tangianu

Date: 2025-01-31

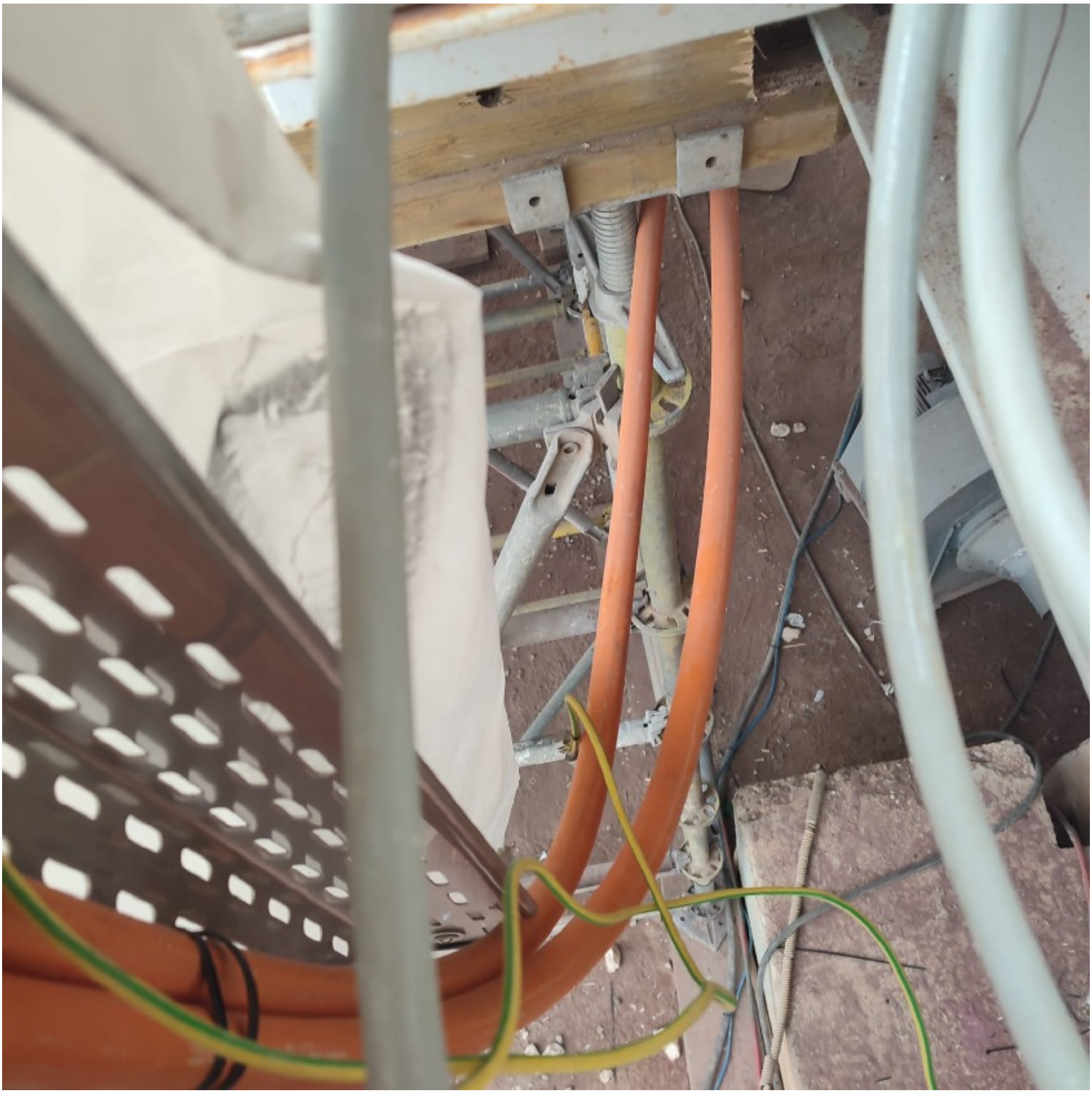
Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

# PUNCH ITEM ENTRY / CLEARANCE FORM

C30001153

PROVERLIS

## 1 -ELEMENT IDENTIFICATION

| | | | |
|---|---|---|---|
| 1.1 Task | C10002187 | 1.4 Discipline | Instrumental |
| 1.2 Item | 950-JE-05102 | DI JB TO FGS | |
| 1.3 Subsystem | 70-00-17 | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | |

## 2 - OBSERVATION

Missing earthing jumper from the door to (950-JE-05102).

Name: Giovanni Tangianu

Date: 2024-12-03

Signature:

## 3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

| | | | |
|---|---|---|---|
| 3.3 Priority | A PL A | Name | Giovanni Tangianu |
| 3.4 Activity code | MC Mechanical Completion | Date | 2024-12-03 |
| 3.5 Action by | RM_CONSTR RM | Signature | |

## 4 - PERFORMED ACTION

Name:

Date:

Signature:

## 5 - CLEARANCE CHECK

done

Name: Eleonora Carotenuto

Date: 2024-12-07

Signature:

## 6- CLEARANCE APPROVAL

Name:

Date:

Signature:

# Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

# NOT APPLICABLE

# Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

# NOT APPLICABLE

# Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

# NOT APPLICABLE

# Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

# Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 70-00-17 & process: MC & discipline : I

| Instrumental | 70-00-17 Junction Box 950-JE-05102 and Multi-core cable (FGS System) | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | | TASK | | | | | |
| Code | Description | Location | Code | Form | Progress | Date | Certificate |
| 950-JE-05102 | DI JB TO FGS | ONSHORE | C10002187 | CJX31 | 100 | 2024-12-03 | RFC 1 |
| 950-JE-05102/B400-FGS-003 | DI JB TO FGS / MARSHALLING PCS | ONSHORE | C10002188 | CJX10 | 100 | 2024-11-25 | RFC 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | 950-JE-05102 | : DI JB TO FGS | | | Dwg | 123A90-DDL-IN-DL-40082 |
| | S/Sys | 70-00-17 | : Junction Box 950-JE-05102 and Multi-core cable (FGS System) | | | Module | LD |
| **TASK** | code | C10002187 | | Location | Onshore Activities | User | Rosetti Marino Quality Control |
| **FORM** | Process | MC | Activity CCK | Discipline | Instrumental Form CJX31 | | Junction and Marshalling Box |

| | | |
|---|---|---|
| 1 | Check equipment is de-energized and safe. | OK |
| 2 | Check available documents are at the latest revision. | OK |
| 3 | Check nameplate data/certification is in accordance with project data. | OK |
| 4 | Check all flange faces are clean and greased with approved lubicants, and that all bolts are fitted and correctly tight (Exd only). | NA |
| 5 | Check all gaskets and bolts are fitted in covers and gland plates (where applicable). | OK |
| 6 | Check enclosure is correctly tagged as per drawing. | OK |
| 7 | Check enclosure is correctly earthed in accordance with project data. | PL |
| 8 | Check that all unused entries are plugged with approved blanks. | PL |
| 9 | Check that terminals are approved and that the correct numbers are fitted. | OK |
| 10 | Check segregation barriers are fitted where necessary. | NA |
| 11 | Check enclosure is correctly mounted and easily accessible. | OK |
| 12 | If required produce Red Line Mark Up for "AS BUILT" | |

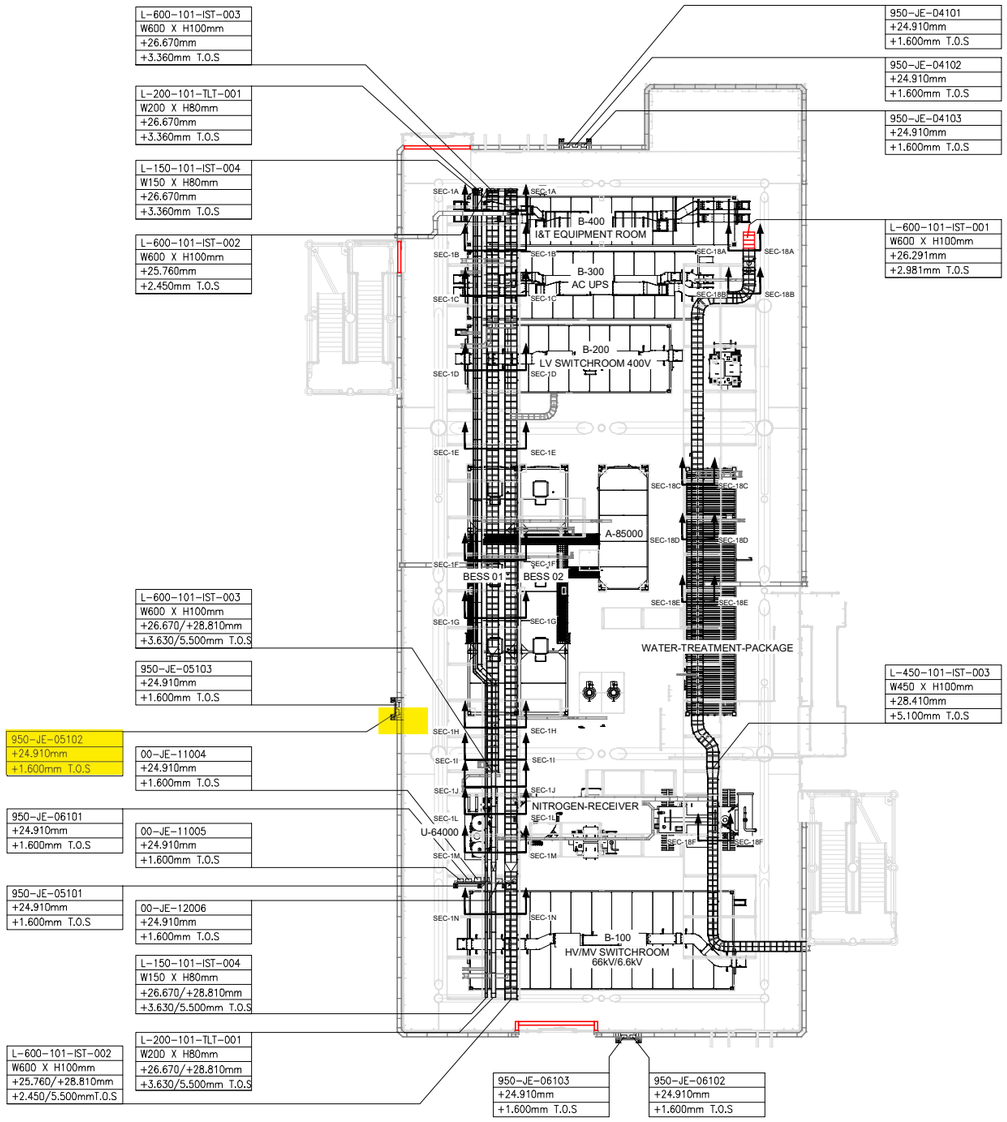
Comments:



| | Performed by | ● WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| **Company** | ICS IMPIANTI | RM(ROSETTI MARINO) | |
| **Name** | Francesco Zucca | Giovanni Tangianu | |
| **Date** | 2024-12-02 | 2024-12-03 | |
| **Signature** | PROVERLIS Digitaly signed by Francesco Zucca 2024-12-02T07:14:42.731Z | PROVERLIS Digitaly signed by Giovanni Tangianu 2024-12-03T12:37:54.012Z | |

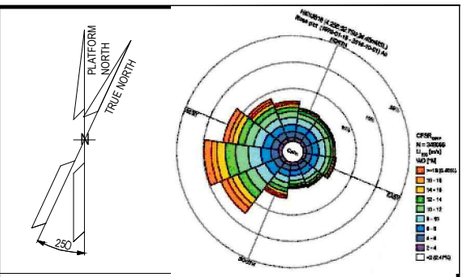
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02




PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:100

VIEW EL. 23310mm to 30310mm




## NOTES

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

## LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- SEC-1A — CABLE TRAY SECTION
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

## HOLDS

## REFERENCE DOCUMENTS

| | |
|---|---|
| 123A90-DDL-PP-DL-70070 | PLOT PLAN - LOWER & UPPER DECK |
| 123A90-DDL-IN-DL-40080 | INSTRUMENT LAYOUT - LOWER DECK |
| 123A90-DDL-IN-DL-40081 | INSTRUMENT LAYOUT - LOWER DECK |
| 123A90-DDL-IN-LIS-40091 | INSTRUMENT CABLE LIST |
| 123A90-DDL-IN-DG-40015 | INSTRUMENT-CCS WIRING DIAGRAMS |
| 123A90-DDL-IN-DG-40016 | INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS |
| 123A90-DDL-IN-DL-40082 | INSTRUMENT MAIN CABLE ROUTING-UPPER DECK |

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 02 | 04/10/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 26/07/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 22/12/23 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-IN-DL-40082**

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

**ROSETTI MARINO SpA**

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

| | | | |
|---|---|---|---|
| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:150 |
| DRAWN VBA | CHECKED LCA | APPROVED DLO | DATE 04/10/24 |
| A1 | DRAWING NO. 123A90-DDL-IN-DL-40082 | SHEET 001 | REV. 02 |

File Name : 123A90-DDL-IN-DL-40082 REV:02.dwg

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

REV. 01

| FIELD | | MULTICABLE | I&T EQUIPMENT ROOM (ITER) |
|---|---|---|---|
| INSTRUMENTS | JUNCTION BOX<br>950-JE-05102 | No. | MARSHALLING CABINET<br>~~B400-FGS-002~~<br>B400-FGS-003 |

<01>

950-MFA-05101 (1 / 8) WH BK — NOTE-2 — C-950-MFA-05101/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MFA-05102 (1 / 8) WH BK — NOTE-2 — C-950-MFA-05102/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MFA-05103 (1 / 8) WH BK — NOTE-2 — C-950-MFA-05103/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

950-MFA-05104 (1 / 8) WH BK — NOTE-2 — C-950-MFA-05104/950-JE-05102
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

| | | |
|---|---|---|
| WH / BK | 1 | PR1 |
| | 2 | |
| | SH | |
| WH / BK | 3 | PR2 |
| | 4 | |
| | SH | |
| WH / BK | 5 | PR3 |
| | 6 | |
| | SH | |
| WH / BK | 7 | PR4 |
| | 8 | |
| | SH | |
| SPARE | 9 | PR5 |
| | 10 | |
| | SH | |
| SPARE | 11 | PR6 |
| | 12 | |
| | SH | |
| | OS | |

950-JE-05102/B400-FGS-003
~~950-JE-05102/B400-FGS-002~~
6x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-950-JE-05102

| | | |
|---|---|---|
| PR1 — Shield Bar | 1 | 950-MFA-05101 |
| | 2 | |
| PR2 — Shield Bar | 3 | 950-MFA-05102 |
| | 4 | |
| PR3 — Shield Bar | 5 | 950-MFA-05103 |
| | 6 | |
| PR4 — Shield Bar | 7 | 950-MFA-05104 |
| | 8 | |
| PR5 — Shield Bar | 9 | SPARE |
| | 10 | |
| PR6 — Shield Bar | 11 | SPARE |
| | 12 | |

Shield Bar — I.E.

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_L | 26/11/24 | G.Randi |

**ROSETTI MARINO SpA**

CROSSWIND | ROSETTI MARINO

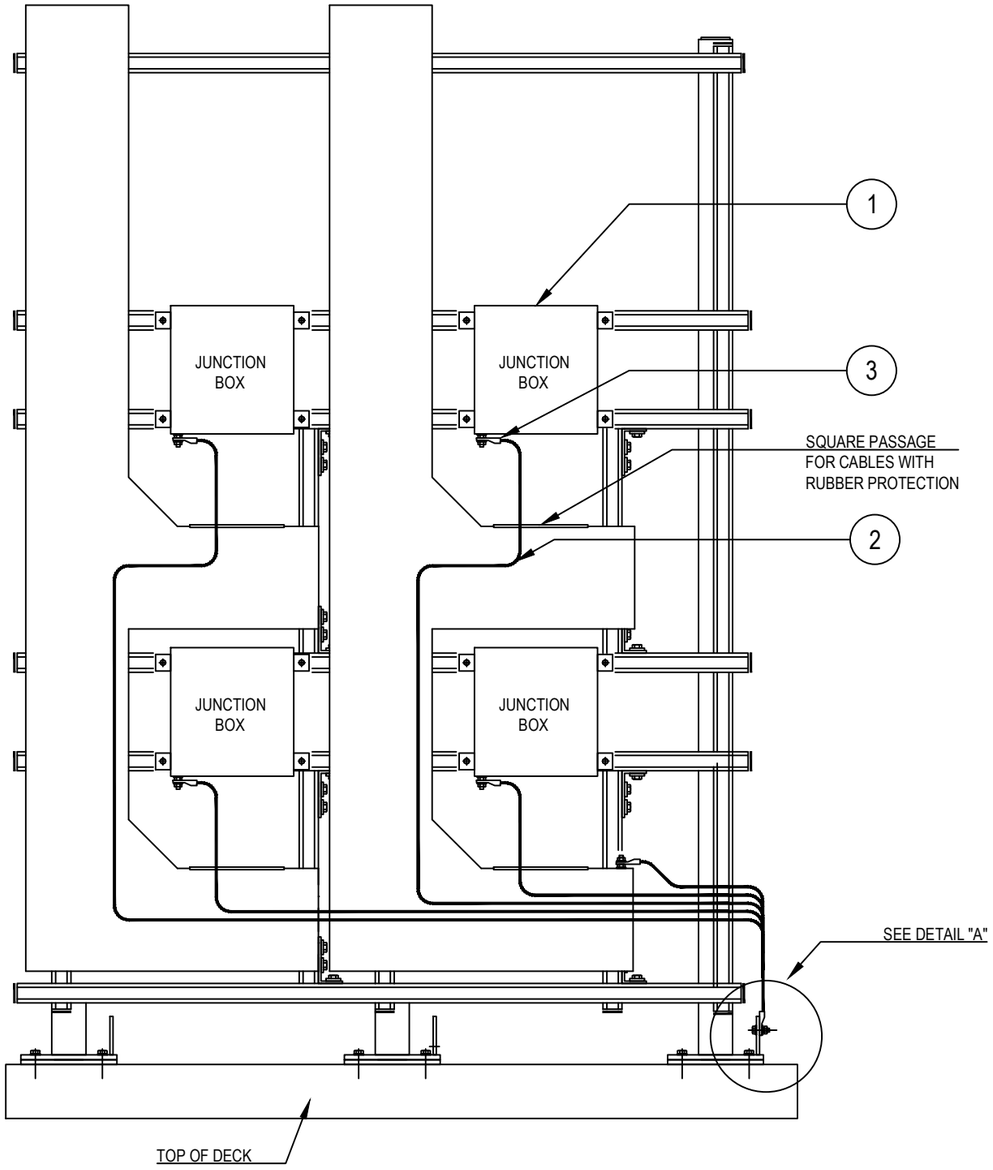
TITLE :
# BASE LOAD POWER HUB (BLPH)
# INSTRUMENT–FGS WIRING DIAGRAMS
# 950–JE–05102

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

| A3 | DRAWING NO. 123A90–DDL–IN–DG–40016 | SHEET 046 | REV. 01 |
|---|---|---|---|

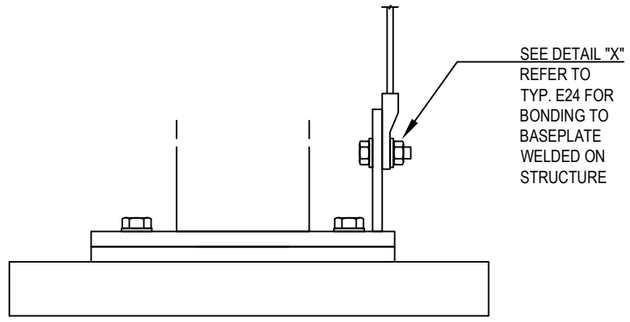
File Name : 123A90-DDL-IN-DG-40016_Rev.01

E15

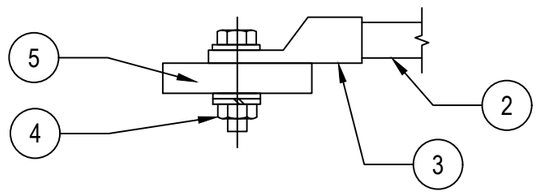



| POS. | DESCRIPTION | MATERIAL | SIZE | Q.TY | NOTE |
|---|---|---|---|---|---|
| 1 | JUNCTION BOX (Ex) | GRP | | | |
| 2 | Y / G INSULATING COPPER CONDUCTOR | COPPER | $6mm^2$ | | |
| 3 | COMPRESSION TYPE LUG FOR INSULATION COPPER CONDUCTOR | AISI 316L | $6mm^2$ | | ~~NOTE 1~~ |
| 4 | HEXAD BOLTS,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

## DETAIL "A"




## DETAIL "X"




NOTES:

~~1) CABLE LUG CRIMPING METHOD SHALL BE HEXAGONAL COMPRESSION DIES ONLY.~~

2) EARTHING PLATE WELDED ON BASE PLATE OF THE COLUM SUPPORT. SEE TYPICAL DETAIL E24

2) EXTERNAL EARTHING CONNECTION ONLY SHALL BE PROTECTED AGAINST CORROSION USING OXIDE RESISTANT COMPOUND (E.G. COPPER GREASE)

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

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

**ROSETTI MARINO SpA**

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

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS–EARTHING SYSTEM
EARTHING FOR ELECTRICAL AND INSTRUMENTALE JB MOUNTED ON RACK SUPPORT

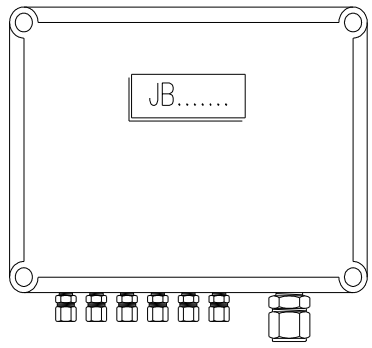
CONTRACT NO./TITLE CW–I–WP4–2023–05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

F.to UNI A3: 420mmx297mm

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

# ELECTRICAL HOOK-UP FOR JUNCTION BOXES




| Ex-d Junction Boxes | | | | | | | |
|---|---|---|---|---|---|---|---|
| TAGNAME | ENTRIES | POSITION (CABLE GLANDS) | | | | | PLUGS |
| | | 1 | 2 | 3 | 4 | 5 | 7 |
| | | M20S | M20 | M25 | M32 | M50 | M20 |
| 00-JE-11001 | 26 | 18 | | 2 | | | 6 |
| 00-JE-11002 | 13 | 10 | | 1 | | | 2 |
| 00-JE-11003 | 26 | 19 | | 2 | | | 5 |
| 00-JE-11004 | 13 | 9 | | 1 | | | 3 |
| 00-JE-11005 | 7 | 3 | | 1 | | | 3 |
| 00-JE-12001 | 26 | 8 | 6 | 2 | | | 10 |
| 00-JE-12002 | 7 | 4 | | 1 | | | 2 |
| 00-JE-12003 | 7 | 4 | 1 | 1 | | | 1 |
| 00-JE-12004 | 26 | 8 | 6 | 2 | | | 10 |
| 00-JE-12005 | 13 | 4 | 1 | 1 | | | 7 |
| 00-JE-12006 | 26 | 4 | 4 | 2 | | | 16 |
| 00-JE-13001 | 13 | | 8 | | 1 | | 4 |
| 00-JE-13002 | 13 | | 7 | | 1 | | 5 |
| 00-JE-13003 | 7 | | 4 | 1 | | | 2 |
| 00-JE-21001 | 13 | | 6 | | 1 | | 6 |
| 00-JE-22001 | 26 | | 8 | 6 | 2 | | 10 |
| 00-JE-22002 | 26 | | 12 | 4 | 2 | | 8 |
| 00-JE-23001 | 13 | | 6 | | 1 | | 6 |
| 00-JE-23002 | 7 | | 4 | 1 | | | 2 |
| 950-JE-01101 | 7 | | 4 | | 1 | | 2 |
| 950-JE-01102 | 7 | | 3 | | 1 | | 3 |
| 950-JE-01103 | 7 | | 3 | 1 | | | 3 |
| 950-JE-01104 | 7 | | 4 | 1 | | | 2 |
| 950-JE-02101 | 13 | | 10 | | | 1 | 2 |
| 950-JE-02102 | 13 | | 10 | | | 1 | 2 |
| 950-JE-02103 | 7 | | 4 | | 1 | | 2 |
| 950-JE-02104 | 7 | | 3 | 1 | | | 3 |
| 950-JE-03101 | 13 | | 7 | | | 1 | 5 |
| 950-JE-03102 | 7 | | 5 | | 1 | | 1 |
| 950-JE-03103 | 7 | | 4 | 1 | | | 2 |
| 950-JE-03104 | 7 | | 6 | 1 | | | 0 |
| 950-JE-04101 | 7 | | 4 | | 1 | | 2 |
| 950-JE-04102 | 7 | | 2 | 1 | | | 4 |
| 950-JE-04103 | 7 | | 6 | 1 | | | 0 |
| 950-JE-04201 | 7 | | 6 | | 1 | | 0 |
| 950-JE-04203 | 7 | | 6 | 1 | | | 0 |
| 950-JE-04205 | 7 | | 6 | | 1 | | 0 |

| Ex-d Junction Boxes | | | | | | | |
|---|---|---|---|---|---|---|---|
| TAGNAME | ENTRIES | POSITION (CABLE GLANDS) | | | | | PLUGS |
| | | 1 | 2 | 3 | 4 | 5 | 7 |
| | | M20S | M20 | M25 | M32 | M50 | M20 |
| 950-JE-04207 | 13 | | 8 | | 1 | | 4 |
| 950-JE-05101 | 13 | | 10 | | | 1 | 2 |
| 950-JE-05102 | 7 | | 4 | 1 | | | 2 |
| 950-JE-05103 | 7 | | 4 | 1 | | | 2 |
| 950-JE-05104 | 7 | | 3 | 1 | | | 3 |
| 950-JE-06101 | 7 | | 2 | | 1 | | 4 |
| 950-JE-06102 | 7 | | 2 | 1 | | | 4 |
| 950-JE-06103 | 7 | | 5 | 1 | | | 1 |
| 950-JE-06201 | 7 | | 6 | | 1 | | 0 |
| 950-JE-06203 | 7 | | 6 | 1 | | | 0 |
| 950-JE-07101 | 7 | | 3 | 1 | | | 3 |
| | | | | | | | |
| TOTALS | | 91 | 219 | 43 | 18 | 4 | 166 |

| Ex-i Junction Boxes | | | | | | | |
|---|---|---|---|---|---|---|---|
| TAGNAME | ENTRIES | POSITION (CABLE GLANDS) | | | | | PLUGS |
| | | | 6 | 7 | | | 9 |
| | | M20S | M20 | M25 | M32 | M50 | M20 |
| 950-JE-04204 | 7 | | 6 | 1 | | | 0 |
| 950-JE-04208 | 7 | | 6 | 1 | | | 0 |
| 950-JE-06204 | 7 | | 6 | 1 | | | 0 |
| TOTALS | | 0 | 18 | 3 | 0 | 0 | 0 |

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 2_D | 13/11/24 | G.Randi |

**ROSETTI MARINO SpA**

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



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MODEL C-225 REV.1

GENERAL NOTE:
- PO: 1724001299 DD 27/06/2024
- ITEM.: 1
- Q.TY: 12
- JB MATERIAL: INOX316L
- EXTERNAL PAINTING: NOT PAINTED
- INTERNAL PAINTING: NOT PAINTED
- ALL DIMENSIONS ARE IN mm

| N° | Q.TY | CODE | DESCRIPTION |
|---|---|---|---|
| IF | 1 | B26-443 | INTERNAL MOUNTING FRAME |
| TB-1 | 19 | WDU2,5A | Ex eb TERMINAL BLOCK 2,5mmq BEIGE COLOUR (WEIDMULLER) |
| DV | 1 | ECDE-D1S | Ex eb IIC Gb INOX DRAIN VALVE ISO M20x1.5 |

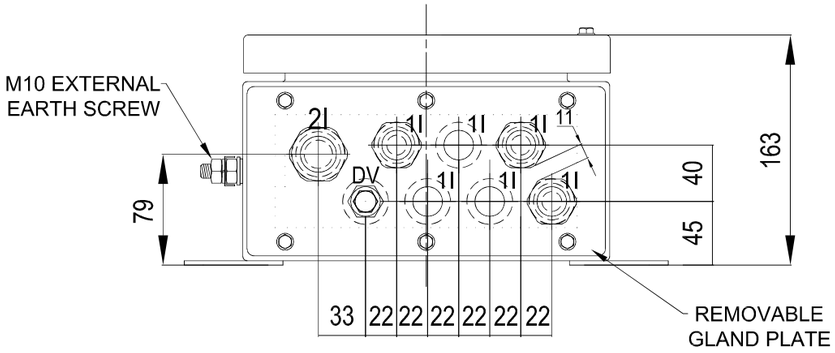
TAG LIST
MATERIAL: INOX
DIMENSION: 60x20

| DESCRIPTION |
|---|
| 00-JE-11005 |
| 00-JE-12002 |
| 00-JE-12003 |
| 950-JE-01103 |
| 950-JE-03103 |
| 950-JE-04102 |
| SPARE |
| SPARE |
| 950-JE-05102 |
| 950-JE-06102 |
| SPARE |
| 00-JE-21002 |

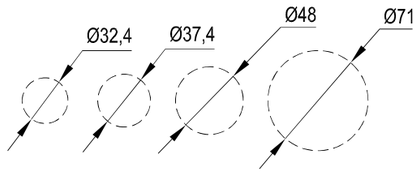
NOTE:
FOR "SPARE" ITEMS THE TAGs ARE UNMARKED

BOTTOM SIDE

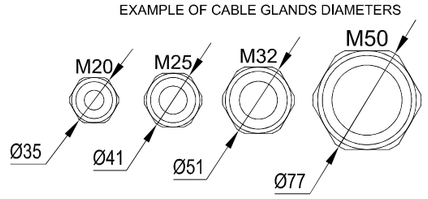
2I - n°1 Ø25.5
1I - n°6 Ø20.5



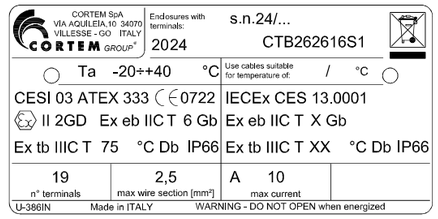

EXAMPLE OF STAR WASHERS DIAMETERS (WEIDMULLER SZS SERIES)



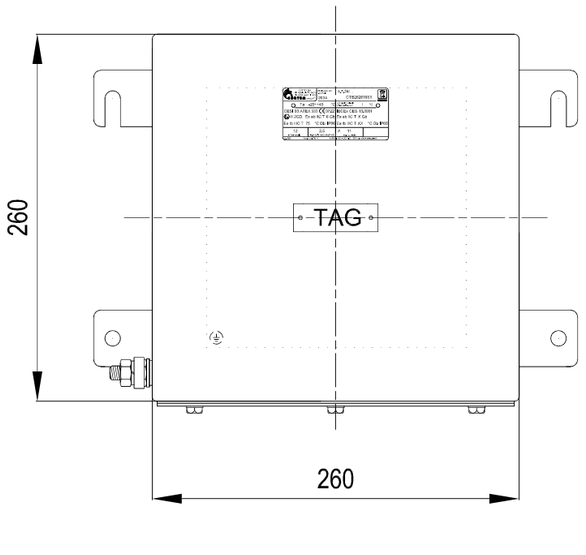

EXAMPLE OF CABLE GLANDS DIAMETERS



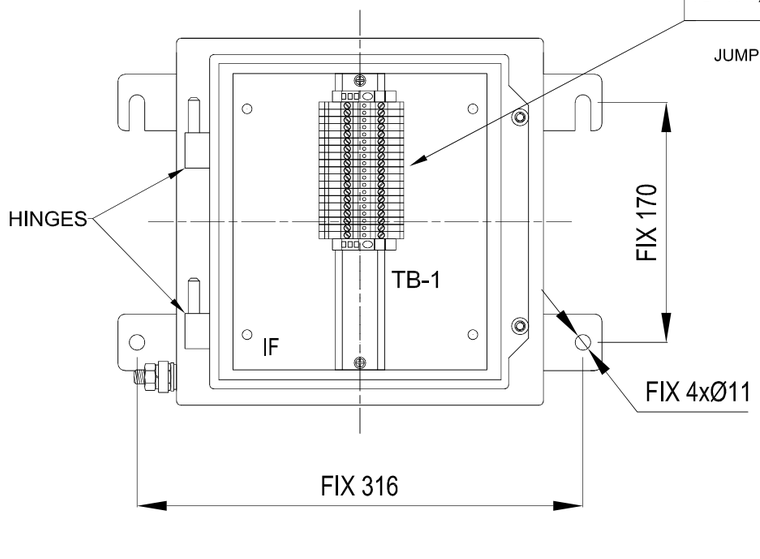

CERTIFICATE NAMEPLATE




EXTERNAL VIEW

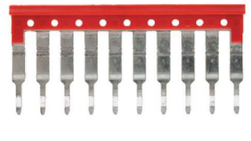



INTERNAL VIEW




TERMINAL BLOCK NUMBERING:
TB-1: 1, 2, SH, 3, 4, SH ..... 11, 12, SH, OS

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



NOTE CORTEM:
- COMM: COV2402708
- RIGA: 1
- Q.TY: 12
- ART. INFOR: CTB262616S1/C2402708/30.
- METTERE LA MORSETTIERA PIU' IN ALTO POSSIBILE E LA BARRA DIN PIU' LUNGA POSSIBILE

REV.4 - 18/07/2024 - FRATTARUOLO

| REV. | DATE | PREP'D | CHK'D | APP'D | DESCRIPTION |
|---|---|---|---|---|---|
| 5 | 08/08/2024 | FRATTARUOLO | GIUSTI | GRATTON | ISSUED FOR CONSTRUCTION (IFC) |
| 4 | 18/07/2024 | FRATTARUOLO | GIUSTI | GRATTON | REISSUED FOR APPROVAL |
| 3 | 17/07/2024 | FRATTARUOLO | GIUSTI | GRATTON | REISSUED FOR APPROVAL |
| 2 | 16/07/2024 | FRATTARUOLO | GIUSTI | GRATTON | REISSUED FOR APPROVAL |
| 1 | 10/07/2024 | FRATTARUOLO | GIUSTI | GRATTON | REISSUED FOR APPROVAL |
| 0 | 28/06/2024 | FRATTARUOLO | GIUSTI | GRATTON | ISSUED FOR APPROVAL |

DRAWING TITLE: ROSETTI MARINO S.P.A.

CORTEM S.p.a.
GENERAL LAYOUT
001 CTB262616S1/C2402708/30.

CORTEM JOB: COV2402708
DRAWING SCALE: /
DRAWING NUMBER: A3-C 27524
SHEET 1 NEXT 2
TOT. 11

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Smart Professional R.2012

# Instrument Junction Boxes Tag list

## Ex-e Execution type

M.C. 6x2x0,75mm$^2$

| | TYPE 1A (AI/AO/DI) |
|---|---|
| 1 | 00-JE-11005 |
| 2 | 00-JE-12002 |
| 3 | 00-JE-12003 |
| 4 | 00-JE-21002 |
| 5 | 950-JE-01103 |
| 6 | 950-JE-03103 |
| 7 | 950-JE-04102 |
| 8 | SPARE |
| 9 | SPARE |
| 10 | 950-JE-05102 |
| 11 | 950-JE-06102 |
| 12 | SPARE |

M.C. 6x3x2,5mm$^2$

| | TYPE 1B (AI) |
|---|---|
| 1 | 950-JE-01101 |
| 2 | 950-JE-01102 |
| 3 | 950-JE-03102 |
| 4 | 950-JE-04101 |
| 5 | 950-JE-04201 |
| 6 | 950-JE-04205 |
| 7 | 950-JE-06101 |
| 8 | 950-JE-06201 |
| 9 | 950-JE-02103 |

M.C. 12x2x0,75mm$^2$

| | TYPE 1C (AI/AO/DI) |
|---|---|
| 1 | 00-JE-11002 |
| 2 | 00-JE-11004 |
| 3 | 00-JE-12005 |
| 4 | 00-JE-21001 |

M.C. 2x(12x2x0,75mm$^2$)

| | TYPE 1D (AI/AO/DI) |
|---|---|
| 1 | 00-JE-11001 |
| 2 | 00-JE-11003 |
| 3 | 00-JE-12001 |
| 4 | 00-JE-12004 |
| 5 | 00-JE-12006 |
| 6 | 00-JE-22001 |
| 7 | 00-JE-22002 |

M.C. 12x3x2,5mm$^2$

| | TYPE 1E (AI) |
|---|---|
| 1 | 950-JE-02101 |
| 2 | 950-JE-02102 |
| 3 | 950-JE-03101 |
| 4 | 950-JE-05101 |

M.C. 12x2,5mm$^2$

| | TYPE 2A (DO) |
|---|---|
| 1 | 00-JE-13003 |
| 2 | 00-JE-23002 |
| 3 | 950-JE-01104 |
| 4 | 950-JE-02104 |
| 5 | 950-JE-03104 |
| 6 | 950-JE-04103 |
| 7 | 950-JE-04203 |
| 8 | 950-JE-05103 |
| 9 | 950-JE-06103 |
| 10 | 950-JE-06203 |
| 11 | 950-JE-07101 |

M.C. 24x2,5mm$^2$

| | TYPE 2B (DO) |
|---|---|
| 1 | 00-JE-13001 |
| 2 | 00-JE-13002 |
| 3 | 00-JE-23001 |
| 4 | 950-JE-04207 |

## Intrinsecally Safe type

M.C. 6x2x0,75mm$^2$

| | TYPE 3A (DI)<br>(1 M25 + 6 M20) |
|---|---|
| 1 | 950-JE-04204 |
| 2 | 950-JE-04208 |
| 3 | 950-JE-06204 |



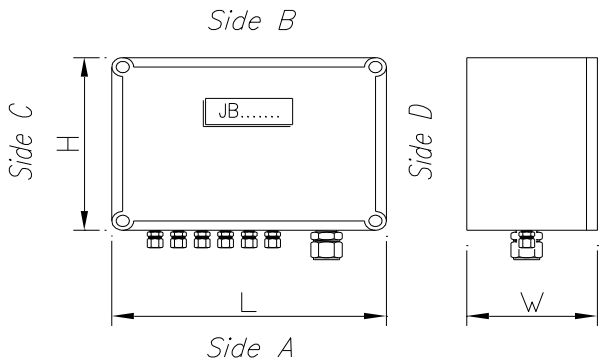
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| Q.TY | ITEM | MANUFACTURER | MODEL |
|---|---|---|---|
| **12** | *Refer to page 5* | **CORTEM** | **CTB262616S1/C2402708/30** |

CABLE ENTRIES: 1 M25 + 6 M20

**TYPE - 1A**

***Drawing***




Gland Plate dimensions: VTA

| | | | | | |
|---|---|---|---|---|---|
| Electrical Construction | ☑ Ex-e | ☐ Ex-i | GR. IIC | Temp. Class T6 | |
| Certificate ATEX | N° | VTA | Standard | | |
| Ingress Protection | ☐ IP55 | ☑ IP66 | Mounting | **HORIZONTAL** | |
| Threads according to Standard | ☐ ISO 7/1 Rc | ☐ UNI 6125 | ☑ METRIC | ☐ None | |
| External Colour | ☐ Grey RAL 9006 | ☐ Blue RAL 5015 | ☑ Electropolished | | |
| Internal Colour | ☐ Orange RAL 2004 | ☑ Standard Manufacturer | | | |

| Material | | | | | |
|---|---|---|---|---|---|
| Enclosure | ☑ Aluminum | ☑ AISI 316L | ☐ Cast Iron | ☐ | |
| Internal/external Screw | ☑ Stanless Steel A4 | ☐ | | | |
| Internal Bottom Plate | ☑ Stanless Steel | ☑ | | | |
| Name Plate | ☑ Plastic | ☐ | | | |

| Options | | | | |
|---|---|---|---|---|
| Earthing Stud | ☑ Internal | ☑ External | Internal Shields Bar | ☐ Insulated |
| Cover with Hinge | ☐ Yes | ☑ No | | ☐ Not Insulated |
| Drain Valve | ☑ Yes | ☐ No | Brathing Valve | ☑ Yes ☐ No |

| Dimensions | | | Thickness | | |
|---|---|---|---|---|---|
| L | VTA | mm | Wall | VTA | mm |
| H | VTA | mm | End Plate | VTA | mm |
| W | VTA | mm | Cover | VTA | mm |
| Name Plate | Dimension (LxH) | | VTA | | mm |
| | Engraved Charapters Height | | 10 | | mm |

| Electrical Connection | Terminal Quantity |
|---|---|
| ☑ By Strip | **19** |
| | Terminals No. |
| ☐ | *TB-1: 1, 2, SH, 3, 4, SH, … 11, 12, SH, OS* |

| | |
|---|---|
| Type | ☐ Unloosening ☑ Size 2,5 mm2 |
| Material | ☑ Thermoplastic ☐ Thermosetting |
| Colour | ☑ Std Manufac. ☐ Blue Ex-i |
| Mounting On | ☐ "C" Bar according to std. EN-50035 |
| | ☑ "Ω" Bar according to std. EN-50022 |
| Arrangement | ☑ Single Row ☐ Double Column |

| Side | Hole Dimensions | | | | Cable Glands ☐ Ex-e/d | | Conduit Seals | | Plugs (SS316 Ex-e) | | Type of cable | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Threaded | | Unthreaded | | | | | | | | Armoured | Unarmoured | Formation | External Diameter | Diameter Under Armour |
| | Q.ty | Size | Q.ty | Size | Q.ty | Size | Q.ty | Size | Q.ty | Size | | | | | |
| A | / | / | 1 | M25 | / | / | / | / | / | / | ☐ | ☐ | / | / | / |
| | / | / | 6 | M20 | / | / | / | / | / | / | ☐ | ☐ | / | / | / |
| | | | | | | | | | | | ☐ | ☐ | | | |
| B | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |
| C | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |
| D | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |
| | | | | | | | | | | | ☐ | ☐ | | | |



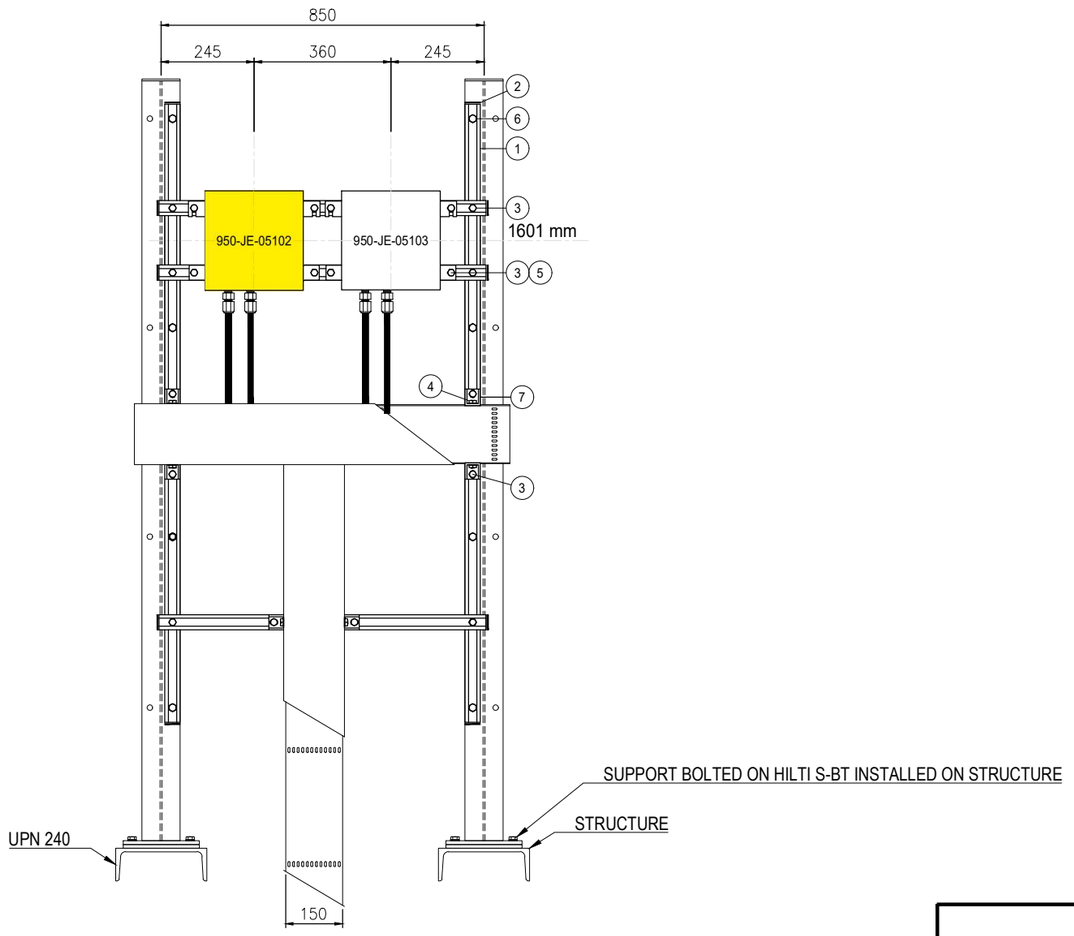

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# JB-11

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

REV. 00

| POS. | DESCRIPTION | Q.TY |
|---|---|---|
| 1 | AISI 316L U-CHANNEL 41x41 | 7m |
| 2 | LDPE PLUG FOR U-CHANNEL 41x41 | 10 |
| 3 | AISI 316L SPRING NUT M10 FOR U-CHANNEL 41X41 + BOLT M10x35 + WASHER M10 | 20 |
| 4 | AISI 316L BOLT M10x35 + NUT M10 + WASHER M10 | 6 |
| 5 | AISI 316L M10 SINGLE HOLE SQUARE FIXING PLATE FOR U-CHANNEL 41x41 | 8 |
| 6 | AISI 316L BOLT M12X35 + NUT M12 + WASHER M12 | 8 |
| 7 | FIXING CLAMP FOR CABLE TRAY/LADDER | 6 |
| | | |
| | | |
| | | |




NOTES

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

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_F | 02/12/24 | G.Randi |

**ROSETTI MARINO SpA**

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT INSTALLATION DETAILS
JUNCTION BOXES ON RACK

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

| A3 | DRAWING NO. 123A90-DDL-IN-DD-40017 | SHEET 014 | REV. 01 |
|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ITEM** | Tag | 950-JE-05102/B400-FGS-003 | : | DI JB TO FGS / MARSHALLING PCS | Dwg | 123A90-DDL-IN-LIS-40091 | |
| | S/Sys | 70-00-17 | : | Junction Box 950-JE-05102 and Multi-core cable (FGS System) | Module | LD/LD_B-400 | |
| **TASK** | code | C10002188 | Location | Onshore Activities | User | Rosetti Marino Quality Control | |
| **FORM** | Process | MC | Activity | CCK | Discipline | Instrumental | Form | CJX10 | Multi/Single-Core Instrument Control Cable |

## CABLE DATA

| | | | | | |
|---|---|---|---|---|---|
| Type | Cu-MICA-XLPE-IS-OS-LSZH-SWB-LSZH | Cores/Size mm² | 6X2X0,75 mm2 | Color | ORANGE |
| From | 950-JE-05102 | To | B400-FGS-003 | | |

| | | |
|---|---|---|
| 1 | Check cable is as specified in project cable schedule. | OK |
| 2 | Check relevant documents are at the latest revision. | OK |
| 3 | Check cable is routed in accordance with cable layout drawings. | OK |
| 4 | Check cable for any physical damage. | OK |
| 5 | Check cable is adequately supported and correctly fixed to rack according to Project specification. | PL |
| 6 | Check bending radius is within the specified limits. | OK |
| 7 | Check cable is correctly loomed and segregated in accordance with specification. | OK |
| 8 | Check cable and core marking are in accordance with specification. | PL |
| 9 | Check cable labelling is in accordance with specification. | PL |
| 10 | Check that glands, shrouds and earthing are in accordance with specification. | OK |
| 11 | Check terminations are in accordance with termination diagram | OK |
| 12 | Check gland plate for single core cables is non-ferrous. | OK |
| 13 | If required produce Red Line Mark Up for "AS BUILT" | |

| | | | |
|---|---|---|---|
| INSULATION | CORE to EARTH | >999 | MΩ |
| | CORE to CORE | >999 | MΩ |
| | CORE to SCREEN | >999 | MΩ |
| | CORE to ARMr | >999 | MΩ |
| | SCREEN to EARTH | >999 | MΩ |
| | SCREEN to ARMr | >999 | MΩ |
| CONTINUITY | CORES | 2,5 | Ω |
| | SCREEN | 2,5 | Ω |
| | EARTH | NA | Ω |
| | ARMr | 2,4 | Ω |
| | TEST VOLTS | 500 | V |

**TEST ALL CORES AND RECORD LOWEST VALUE**

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

**TESTING INSTRUMENTS USED**

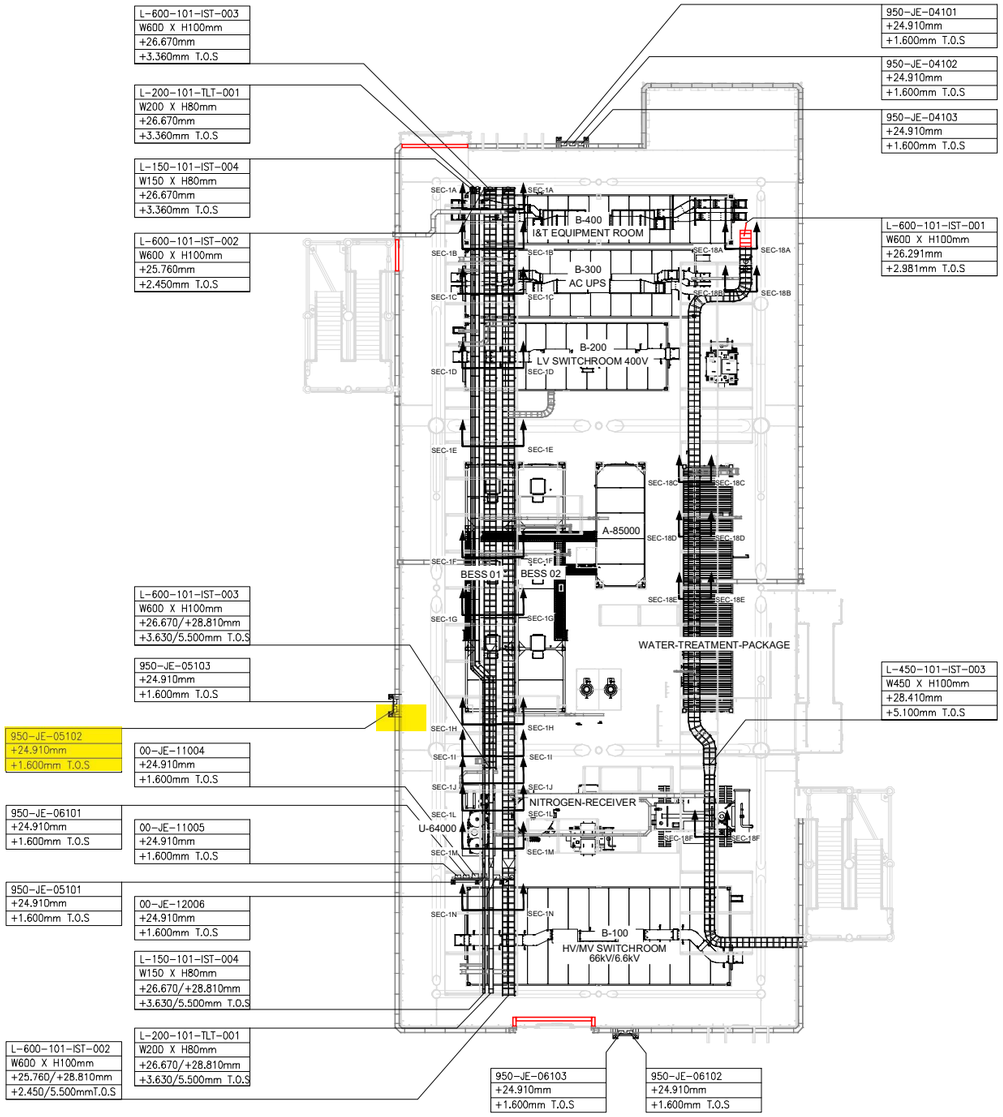
TYPE / SERIAL N°: MEGGER : KEW3125A SERIAL: W8330207 Calibration date: 10/07/2024

Comments Note 5 : Refer to PL: C30000679

| Page 1/1 | Performed by | ☑ WITNESS ☐ REVIEW | ☐ WITNESS ☐ REVIEW |
|---|---|---|---|
| Company | ICS IMPIANTI | RM (ROSETTI MARINO) | |
| Name | Carmelo Bongiovanni | Giovanni Tangianu | |
| Date | 2024-11-22 | 2024-11-25 | |
| Signature | PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-11-22T17:36:14.316Z | PROVERLIS Digitaly signed by Giovanni Tangianu 2024-11-25T17:36:30.840Z | |

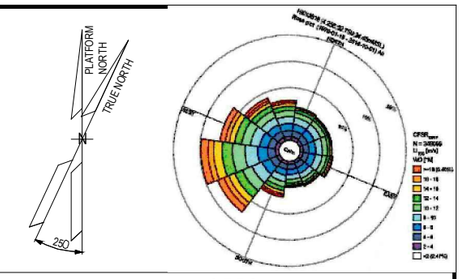
DRAWING NO. 123A90-DDL-IN-DL-40082

REV. 02




PRIMARY CABLETRAY
LOWER DECK
SCALE: 1:100

VIEW EL. 23310mm to 30310mm




## NOTES

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

## LEGEND

- MAIN CABLE TRAY
- SECONDARY CABLE TRAY
- CABLE TRAY ELEVATION CHANGE
- SEC-1A — CABLE TRAY SECTION
- INSTRUMENT CABLE TRAY VERTICAL RAISE
- INSTRUMENT CABLE TRAY VERTICAL DROP
- TAG
- SIZE
- ELEVATION
- ELEVATION(T.O.S)

## HOLDS

## REFERENCE DOCUMENTS

| | |
|---|---|
| 123A90-DDL-PP-DL-70070 | PLOT PLAN - LOWER & UPPER DECK |
| 123A90-DDL-IN-DL-40080 | INSTRUMENT LAYOUT - LOWER DECK |
| 123A90-DDL-IN-DL-40081 | INSTRUMENT LAYOUT - LOWER DECK |
| 123A90-DDL-IN-LIS-40091 | INSTRUMENT CABLE LIST |
| 123A90-DDL-IN-DG-40015 | INSTRUMENT-CCS WIRING DIAGRAMS |
| 123A90-DDL-IN-DG-40016 | INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS |
| 123A90-DDL-IN-DL-40082 | INSTRUMENT MAIN CABLE ROUTING-UPPER DECK |

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 02 | 04/10/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 26/07/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 00 | 22/12/23 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

**VALID FOR CONSTRUCTION**
FDL DWG: **123A90-FDL-IN-DL-40082**

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

**ROSETTI MARINO SpA**

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT MAIN CABLE ROUTING-LOWER DECK
TOS EL. 23.310M

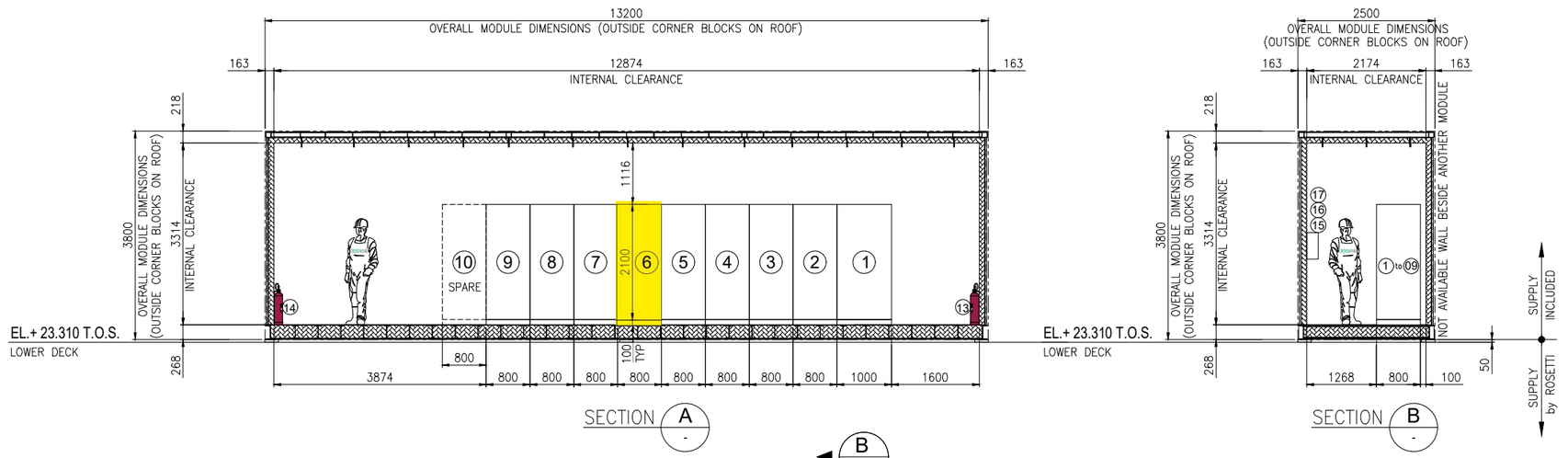
| | | | |
|---|---|---|---|
| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:150 |
| DRAWN VBA | CHECKED LCA | APPROVED DLO | DATE 04/10/24 |

| | | | |
|---|---|---|---|
| A1 | DRAWING NO. 123A90-DDL-IN-DL-40082 | SHEET 001 | REV. 02 |

File Name : 123A90-DDL-IN-DL-40082 REV.02.dwg

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

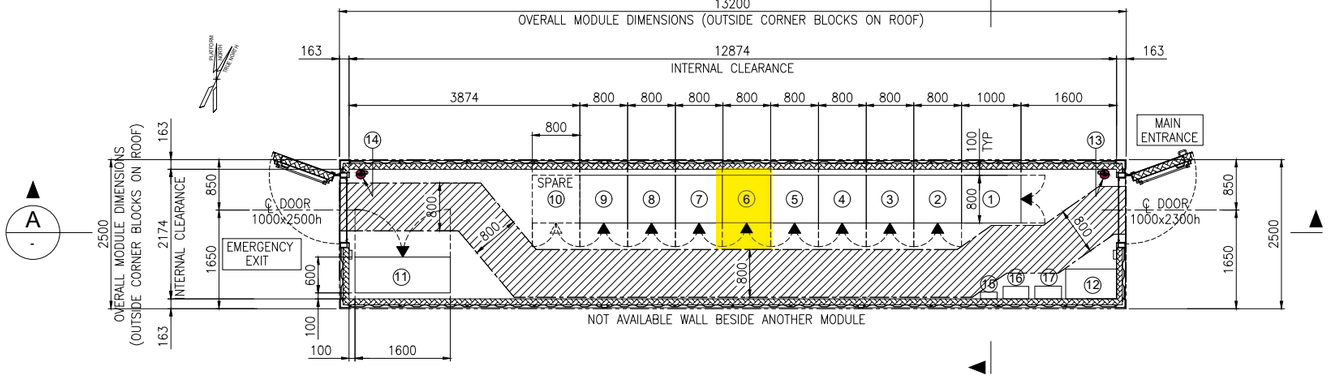
REV. 03




SECTION A -



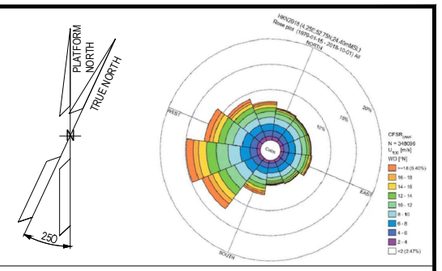

SECTION B -




EQUIPMENT LAYOUT
"B-400" I&T EQUIPMENT ROOM
BOTTOM PLAN

## EQUIPMENT LIST

| REF. | TAG No. | DESCRIPTION | LENGTH (mm) | WIDTH (mm) | HEIGHT (mm) | NOTE |
|---|---|---|---|---|---|---|
| 1 | B400-SRV-001 | SERVER CABINET | 1000 | 800 | 2100 | |
| 2 | B400-NET-001 | NETWORK CABINET | 800 | 800 | 2100 | |
| 3 | B400-EMCS-001 | EMCS SYSTEM CABINET | 800 | 800 | 2100 | |
| 4 | B400-PCS-002 | PCS MARSHALLING CABINET | 800 | 800 | 2100 | |
| 5 | B400-PCS-001 | PCS SYSTEM CABINET 03 | 800 | 800 | 2100 | |
| 6 | B400-FGS-003 | FGS MARSHALLING CABINET 2 | 800 | 800 | 2100 | |
| 7 | B400-FGS-002 | FGS MARSHALLING CABINET 1 | 800 | 800 | 2100 | |
| 8 | B400-FGS-001 | FGS SYSTEM CABINET | 800 | 800 | 2100 | |
| 9 | B400-SIS-001 | SIS SYSTEM/MARSHALLING CABINET | 800 | 800 | 2100 | |
| 10 | - | SPARE | | | | |
| 11 | B400-HSB-001 | DISTRIBUTION & HVAC PANEL - I&T ROOM | 1600 | 600 | 2300 | |
| 12 | - | TABLE | 850 | 500 | 750 | |
| 13 | - | PORTABLE EXTINGUISHER (CO2) 5 Kg. | 150 | 150 | 750 | |
| 14 | - | PORTABLE EXTINGUISHER (CO2) 5 Kg. | 150 | 150 | 750 | |
| 15 | - | FIRST AID KIT | 280 | 115 | 200 | |
| 16 | - | RESUSCITATION UNIT | 430 | 210 | 480 | |
| 17 | - | CABINET INCLUDED N.10 ESCAPE MASK | 448 | 213 | 422 | |




## NOTES

1. U.N.O. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DOCUMENT VALID ONLY FOR INSTRUMENT COMPONENT, FOR OTHER SCOPE LOCATION AND INFORMATION, PLEASE REFER TO VENDORS AND PROJECT DOCUMENTS.

## LEGEND

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

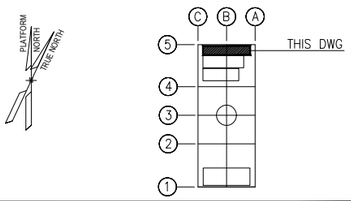
## HOLDS

.

## REFERENCE

| DOCUMENT TITLE | DOCUMENT NUMBER |
|---|---|
| Control System Architecture Detailed Drawings | 123A90-DDL-IN-DD-40096 |
| Data Network Architecture Drawings | 123A90-DDL-IN-DD-40019 |
| Earthing layouts drawings (CCR, ITER) | 123A90-DDL-IN-DL-40013 |
| Instrument and Telecom MCT Layout – Lower Deck | 123A90-DDL-IN-DL-40086 |
| "B-400" I&T Equipment Room – Architectural Layout | 123A90-DDL-AR-DL-10015 |
| "B-400" ARCHITECTURAL GENERAL LAYOUT PLAN, WIEW, SECTIONS & TYP. DETAILS | 123A90-DDL-AR-DL-10015 |
| "B-400" GENERAL ARRANGEMENT DRAWING | 1724000049-AR-DA-00017 |
| "B-400" GENERAL ARRANGEMENT DRAWING | 1724000049-AR-DD-00021 |
| "B-400" HVAC SYSTEM G.A. and DETAILS | 1724000049-HV-DA-00067 |

## KEY PLAN




| REV. | DATE | DRN | CHKD | APPD | DESCRIPTION |
|---|---|---|---|---|---|
| 03 | 04/10/24 | VBA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 02 | 27/05/24 | MGA | LCA | DLO | ACCEPTED FOR CONSTRUCTION (AFC) |
| 01 | 22/01/24 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |
| 00 | 07/11/23 | VBA | LCA | DLO | ISSUE FOR REVIEW (IFR) |

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
OFF-SHORE ITER
EQUIPMENT LAYOUT

| CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | | | SCALE 1:33,3 |
|---|---|---|---|
| DRAWN MGA | CHECKED LCA | APPROVED DLO | DATE 27/05/24 |
| A1 | DRAWING NO. 123A90-DDL-IN-DL-40012 | SHEET 001 | REV. 03 |

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

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

**ROSETTI MARINO SpA**

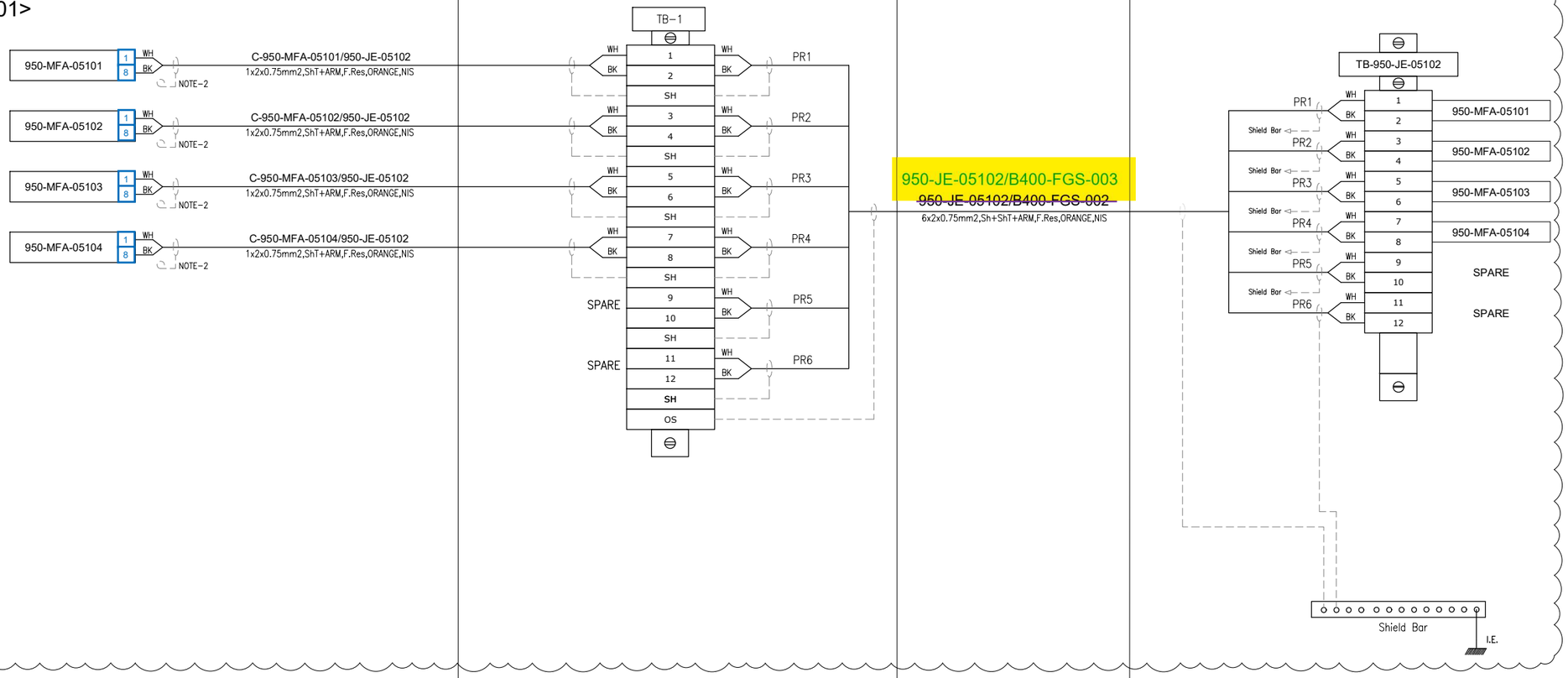
File Name : 123A90-DDL-IN-DL-40012 Rev.03.dwg

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

REV. 01

| FIELD | | MULTICABLE | I&T EQUIPMENT ROOM (ITER) |
|---|---|---|---|
| INSTRUMENTS | JUNCTION BOX 950-JE-05102 | No. | MARSHALLING CABINET ~~B400-FGS-002~~ B400-FGS-003 |

<01>




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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_K | 18/11/24 | G.Randi |

**ROSETTI MARINO SpA**

CROSSWIND

ROSETTI MARINO

TITLE :

# BASE LOAD POWER HUB (BLPH)
# INSTRUMENT–FGS WIRING DIAGRAMS
# 950–JE–05102

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

| | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| A3 | 123A90–DDL–IN–DG–40016 | 046 | 01 |

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

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

REV. 01

## NOTES:

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

<01>

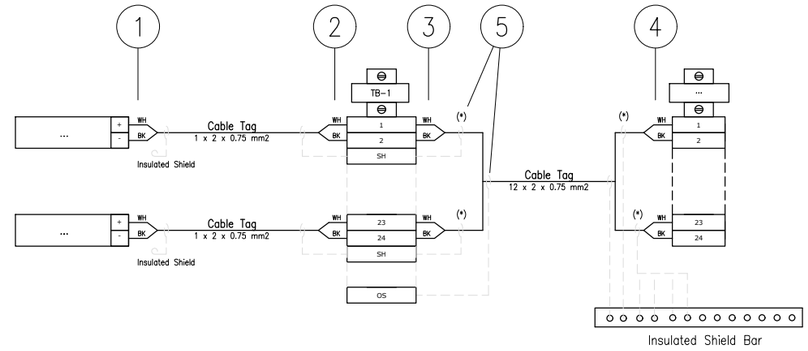
## LEGENDS & SYMBOLS:

LEGEND:

| | |
|---|---|
| I.E. | - GREEN ——— INSTRUMENT SIGNAL EARTH |
| P.E. | - GREEN/YELLOW —— P.E. EARTH/BONDING |
| | - TERMINAL BLOCK (TB) |
| WH | - WHITE |
| BK | - BLACK |
| RD | - RED |
| S | - SHIELD TERMINAL |
| OS | - OVERALL SHIELD TERMINAL |
| O/A Shld | - OVERALL SHIELD |
| I&O/A Shld | - INDIVIDUAL & OVERALL SHIELD |
| NIS | - NON INTRINSICALLY SAFE |
| IS | - INTRINSICALLY SAFE |
| P.E. | - PLANT EARTH |
| PCS | - PROCESS CONTROL SYSTEM <01> |
| ESD | - EMERGENCY SHUTDOWN SYSTEM |
| SIS | - SAFETY INSTRUMENT SYSTEM |
| FGS | - FIRE & GAS SYSTEM <01> |
| MC | - MARSHALLING CABINET |
| AI | - ANALOGUE INPUT |
| AO | - ANALOGUE OUTPUT |
| DI | - DIGITAL INPUT |
| DO | - DIGITAL OUTPUT |
| JE | - JUNCTION BOX FOR ELECTRICAL SIGNALS <01> |

## TYPICAL WIRE CROSS-FERRULING:

### PHILOSOPHY OF CROSS-FERRULING: <01>




(*) Single shield is foreseen only for AI/AO signals.

1 - INSTRUMENT TERMINAL NO. OR POLARITY/JB NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

2 - INSTRUMENT TERMINAL NO. OR POLARITY/INSTRUMENT TAG NO./JB TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

3 - PAIR OR CORE NO./MARSHALLING CABINET NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

4 - PAIR OR CORE NO./JB NO./JB TERMINAL NO./TB NO./TERMINAL NO.
(SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO THE SHIELD)

5 - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
(HEAT SHRINKABLE BLUE FOR SHIELD OF NIS INSTRUMENT CABLE)

6 - IN CASE OF CONNECTION FROM RIGHT TO LEFT, ORDER OF INFORMATION SHALL BE MIRRORED

### REFERENCE DRAWINGS

| | |
|---|---|
| PIPING AND INSTRUMENT DIAGRAM | 123A90-DDL-PR-PID-80009 |
| INSTRUMENT INDEX | 123A90-DDL-IN-LIS-40088 Rev.01 |
| F&G DETECTORS LAYOUT | 123A90-DDL-SAF-DL-30027 |

CROSSWIND

ROSETTI MARINO

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

| REV.: | DATE: | SIGNATURE: |
|---|---|---|
| 1_K | 18/11/24 | G.Randi |

**ROSETTI MARINO SpA**

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

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

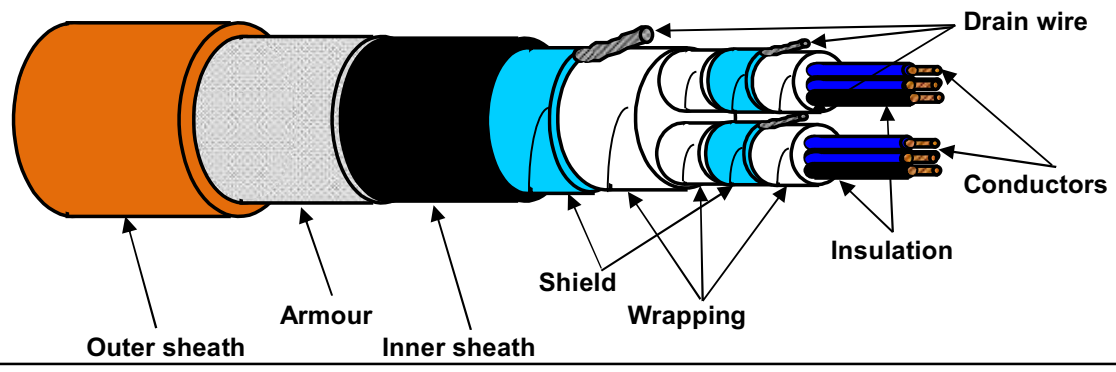
| | DRAWING NO. | SHEET | REV. |
|---|---|---|---|
| A3 | 123A90-DDL-IN-DG-40016 | 003 | 01 |

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

| Tag Number | Category | Discipline | Eng Status | NativeDoc | Layout | Parent Tag | Main Function | Secondary Function | Area | From Tag | From Main Function | From Area | To Tag | To Main Function | To Area | Material ID | Material Desc. | Gland Standard | From Gland | From Entry | From Fitting | To Gland | To Entry | To Fitting | Routing | Routing Manual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 950-JE-05102/B400-FGS-003 | Cable | IN | VFC | 123A90-DDL-IN-LIS-40091 | | | | | | 950-JE-05102 | DI JB to FGS | Lower Deck | B400-FGS-003 | Marshalling FGS | Lower Deck (B-400) | SMICV10-6X2X0,75 | Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 6x2x0,75mm² - Orange | M25 | T2_M25_Double | | | n.a. | | | | L-SEC-29 / L-SEC-9 / L-SEC-1F / L-SEC-1E / L-SEC-1D / L-SEC-1C / L-SEC-1B / L-SEC-1A / B-400-SEC-1A / B-400-SEC-1B / I-MCT-401 |

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

## 6X2X0,75 - INSTRUMENT CABLE - Fire Resistant - Not I.S.




### TECHNICAL FEATURES

| | | |
|---|---|---|
| **Conductors :** | **7-STRANDED** plain/bare soft annealed copper wires | **IEC 60228 Class 2** |
| **Insulation :** | Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,5 mm | |
| **Cores colour code :** | **White - Black (each core NUMBERED for PAIR identification)** | |
| **Pair Assembling :** | 10/1mt | |
| **Pair Wrapping:** | by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%) | |
| **Drain wire :** | 7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield | |
| **Pair Shield :** | by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%) | |
| **Shield Insulation :** | by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%) | |
| **Total Assembling :** | 3/1mt | |
| **Overall Wrapping:** | by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%) | |
| **Drain wire :** | 7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield | |
| **Overall Shield :** | by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%) | |
| **Inner sheath :** | Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,5 mm | |
| **Inner sheath color code:** | **Black** | |
| **Armour :** | Galvanized Steel Wire Braid Armour (coverage ≥ 90%) | |
| **Outer sheath :** | Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant, Average Thickness 1,7 mm | |
| **Outer sheath color code:** | **Orange** | |
| **Outer printing (INKJET) :** | **FLEI - 6X2X0,75 SQMM - MGT/XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -** | |
| **(every 1000 mm)** | **IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking** | |
| **Under armour diameter :** | (20,6 ± 10%) mm | |
| **Over armour diameter :** | (21,8 ± 10%) mm | |
| **Outer diameter :** | (25,2 ± 10%) mm | |
| **Bending radius :** | cable outer diameter x 10 (in fixed installation) | |
| **Voltage Test :** | 1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield) | |
| **Conductors DC Resistance :** | ≤ 26 Ω/km (@ 20°C) | |
| **Insulation Resistance :** | ≥ 1000 MΩ x Km (@ 20°C) | |
| **Mutual Capacitance :** | ≤ 150 nF/km | |
| **L/R ratio :** | ≤ 25 µH/Ω | |
| **Inductance :** | ≤ 0,9 mH/km | |
| **Applicable Standards** | | |
| **Design Guidelines :** | **IEC 60092.376** | |
| **ON COMPLETE CABLE** | | |
| **Fire Resistant test :** | **IEC 60331.21** | |
| **Flame Retardant test :** | IEC 60332.1.2 - IEC 60332.3.22 | |
| **Acid Gas generation :** | IEC 60754.1/2 | |
| **Smoke density/Light Transmittance :** | IEC 61034.2 (LT ≥ 60%) | |
| **Hazardous Areas :** | IEC 60079.14 par.9.3.2a | |
| **Temperature Range :** | | |
| **ON INSULATION** | (max +90°C) (max continuous operation temperature of conductors) | |
| | (max +250°C) (max conductors temperature during short-circuit for 5 seconds) | |
| **ON COMPLETE CABLE** | | |
| **During Operation :** | (-20°C up to +90°C) (in fixed installation) | |
| **During installation :** | (- 5°C up to +50°C) | |
| **Note :** | **To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.** | |

| *Office* | Date | Sign | Rev. | Date | Sign |
|---|---|---|---|---|---|
| **Drawn by :** | 06/05/2024 | Messa | | | |
| **Checked :** | 06/05/2024 | Spaccasassi | | | |
| **Approved :** | 06/05/2024 | Cucinotta | | | |

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# Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

# NOT APPLICABLE

# Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

# NOT APPLICABLE

# Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

# NOT APPLICABLE

# Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

# NOT APPLICABLE

# Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

# NOT APPLICABLE

# Section 12 FAT / VENDOR REPORTS

# NOT APPLICABLE

# Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

# NOT APPLICABLE