Ballard Power Systems Europe A/S
Majsmarken 1
9500 Hobro
Denmark

| Revision history | | |
|---|---|---|
| **Rev.** | **Date.** | **Description** |
| 001 | 6/5/2024 | First Issue |
| 002 | 9/9/2025 | Updated, as build |
| 003 | 9/29/2025 | Updated per comments from PK |
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|---|---|
| **Document Title:** | **BLPH Project - Panel Cabinet Layout: UC31 10ft Control Cabinet** |
| **Document Number:** | K559-2254-CWIWP4202202-E03-004 |
| **Revision:** | Rev003 |
| **Sequence Number:** | 004 |
| **File Name:** | K559-2254-CWIWP4202202-E03-004Rev003 |
| **Purchaser Job:** | K559-2254 |
| **Purchase Order:** | CWIWP4202202 |
| **Code:** | E03 |
| **Requsition Number:** | n/a |
| **Customer:** | CrossWind C.V., Rotterdam, The Netherlands |

# BALLARD™

# +UC31

Ballard Power Systems Europe - Technology Solutions

Cabinet: 10ft Container Control
Location: 10ft Container, Behind access hatch

Cabinet Supply:
Vin = 400VAC, 3P+N+PE
IKmax = 10kA
IP20

AC / DC Sense:
AC: Vin = 400VAC, 3ph
AC: IKmax = 25kA

DC: Vin = 750VDC
DC: IKmax = 10kA

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & A01 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Front Page | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 1 / 81 |

# Ballard Power Systems Europe - Technology Solutions, Cabinet Wiring Colors

## Standard Basis: EN 61439

## Required wire standard compliance:

Required: IEC Wire
Required: UL Recognized
Required: CSA/UL

## Wire Numbering:

- Wires inside panels are to be numbered
- Wire number system is perferably "potential oriented with subnumber"
- All wires of the same potential (e.g. DC Common) have the same main number, with sequential subnumber.
- Potential numbers with fewer digits may be leading zero padded (e.g. 19 -> 019)
- Separator between main and subnumber is "."

Example: 019.1 BUWH 0.75mm²

- 019 — Wire potential number
- 1 — Wire sequential subnumber with separator
- BUWH — Wire color code (Dark Blue with White stripe)
- 0.75mm² — Wire dimension

### AC Wiring Colors

| | |
|---|---|
| AC Power Circuit (Generic) | Black (BK) |
| AC Phase L1 | Brown (BN) |
| AC Phase L2 | Black (BK) |
| AC Phase L3 | Grey (GY) |
| AC Neutral | Light Blue (BU) |
| Externally supplied circuit | Orange (OG) |

### DC Wiring Colors

| | |
|---|---|
| DC Power Circuit | Black (BK) |
| DC Control Voltage (24V) | Dark Blue (BU) |
| DC Control Voltage Refence (0V) | Dark Blue with White Stripe (BUWH) |
| Signal Wire (DI, DO) | White (WH) |
| Signal Wire (AI, AO) | Violet (VT) |
| Externally supplied circuit | Orange (OG) |

### PE Wiring Colors

| | |
|---|---|
| Protective Earth (PE) | Green/Yellow (GNYE) |

### Wire Color Abbreviations

| | |
|---|---|
| BK | Black |
| BN | Brown |
| RD | Red |
| OG | Orange |
| YE | Yellow |
| GN | Green |
| BU | Blue |
| VT | Violet |
| GY | Gray |
| WH | White |
| PK | Pink |
| GD | Gold |
| TQ | Turquoise |
| SR | Silver |
| GNYE | Green/Yellow |
| SH | Shield |

| | |
|---|---|
| Reference Item Number | Ballard Part # TBD |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub |
| EPLAN Revision | 12 |
| EPLAN Project Pages | 627 |
| = | ++ \| + UC31 \| & A01 |

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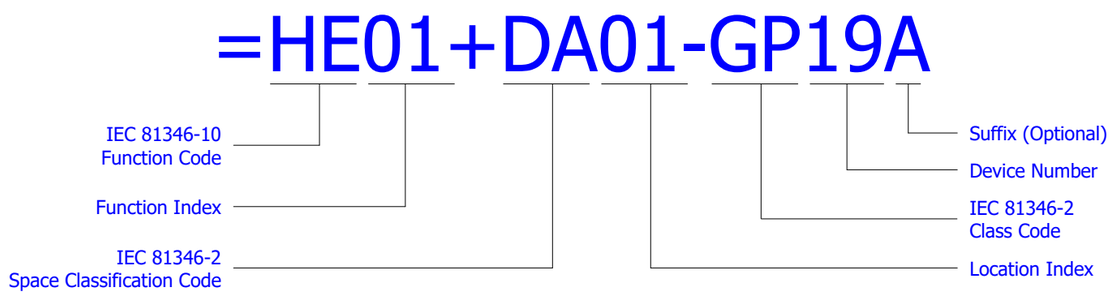
| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Standard Wire Colors | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 2 / 81 |

FRM5103656/0B

# Ballard Power Systems Europe - Technology Solutions Device Tag Process

A Ballard Device Tagname consists of three parts:
- A function designation (=)
  - According to IEC81346-10, Table B.1 and B2.
  - Always two letters followed by two digits
- A location designation (+)
  - According to IEC81346-2, Table 4
  - Always two letters followed by two digits
- A class code (-)
  - According to IEC81346-2, Table 2
  - Always two letters followed by two or three digits plus optional suffix

Sample fully qualified Device Tag (DT) for a Coolant Pump




### IEC81346-10 Function Examples

IEC 81346-10 Table B.1 and B.2 provide a class definition system, which provides a two letter code for the functional description
Table B.1 is used for power supply systems and table B.2 for other systems

| IEC 81346-10 Table B.1 / B.2 | Function Codes (Example) |
|---|---|
| =AA | Structural System, Load support (Frame) |
| =BA | Transporting Electrical Energy (Power Converters) |
| =HA | Supply System, Gaseous Matter (Gas Piping) |
| =HE | Supply System, Heating/Cooling (Radiator) |
| =JA | Distribution System, Gaseous Matter (Gas Handling Unit) |
| =JB | Distribution System, Liquid Matter (Fluid Drain) |
| =LA | Control System, Process (PLC, SCADA) |
| =LB | Control System, Safety (Safety PLC) |
| =QA | Storage System, Gaseous Matter (Gas Storage) |
| =RE | Energy Conversion System, Chemical to Electricity (Fuel cells, Batteries) |

### IEC81346-2 Space Classification

IEC 81346-2 Table 4 provide a classification scheme for spaces, which provides a two and three letter code for the space (location) classification.
Class code "1" and "1" is used for the location scheme

| IEC 81346-2 Table 4 | Location Codes (Example) |
|---|---|
| +GB | Space for power generation, Chemical (Fuel Cells) |
| +DA | Space for active technical equipment |
| +UC | Space for electrical equipment (Electrical Cabinet) |

### IEC81346-2 Class Code

IEC 81346-2 Class Codes is a scheme for defined objects for reference designations according to their inherent function

| IEC 81346-2 Table 2 | Class Codes (Example) |
|---|---|
| -BA | Sensing, electrical potential (Voltage Transducer) |
| -BC | Sensing, electrical current (Current Transducer) |
| -BP | Sensing, pressure (Pressure Transducer) |
| -BT | Sensing, temperature (Temperature Transducer) |
| -EA | Emitting, light (Light Fixture) |
| -FC | Protecting, overcurrent (Fuse, MCCB) |
| -GB | Generating, Chemical Reaction (Fuel Cell) |
| -GP | Generating, Liquid Flow (Pump) |
| -GQ | Generating, Gas Flow (Van, Ventilator) |
| -KE | Processing, Electrical signals (PLC) |
| -KF | Processing, Information (Network Switch) |
| -MA | Driving, Torque (AC Motor) |
| -QA | Controlling, Electric Current (Contactor, Motor Starter) |
| -QB | Controlling, Electric Separation (Disconnector) |
| -QM | Controlling, Fluid On/Off (Valve) |
| -QN | Controlling, Fluid Regulation (Damper, Gas Control Valve) |
| -WD | Guiding, Low Voltage Electric Energy (AC or DC power Cable) |
| -WE | Guiding, Reference Potential (Grounding Wire/Cable) |
| -WG | Guiding, Electric Signals (Control, Network Cable) |

| | |
|---|---|
| Reference Item Number | Ballard Part # TBD |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub |
| EPLAN Revision | 12 |
| EPLAN Project Pages | 627 |
| = ++ + UC31 & A01 | |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Tagging Standard | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 3 / 81 |

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# Ballard Power Systems Europe - Technology Solutions

## Controller IO Overview

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C02 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Container Controller, 20ft Rack 1/3 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 4 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01+UC31-KE06
DEIF AMC300
Controller Extension Rack

## -Slot1
DEIF PSM3.2
Power Supply
Module 3.2

PSM3.2

| | | | | |
|---|---|---|---|---|
| | PE | PE &C03/26.1 | | Frame Ground |
| | 1 | 12/24V &C03/26.1 | | Supply + |
| | 2 | 0V &C03/26.1 | | Supply COM |
| | 3 | R1 COM | | Status OK Relay COM |
| A52.4 | 4 | DO1 | DO1 | Status OK Relay |
| | 5 | R2 COM | | Relay 2 COM |
| A52.5 | 6 | DO2 | DO2 | Relay 1 Out |
| | 7 | R3 COM | | Relay 3 COM |
| A52.6 | 8 | DO3 | DO3 | Relay 3 Out |

EtherCAT Follower Ring Topology — EtherCAT +&C01/6.5:C +&C01/5.8:E X03 — Ethernet-1 IN

EtherCAT Follower Ring Topology — EtherCAT +&C01/6.6:C +&C01/5.8:E X03 — Ethernet-2 OUT

Bus Follower
Multi-line 300

## -Slot2
&C03/18.1
&C03/18.2
ACM3.1
Alternating Current Module 3.1

ACM3.1

| | | | | |
|---|---|---|---|---|
| 1 | L1 | &C03/18.1 | BA30_BA01_L1 | Main Output (Busbar) - L1 Voltage |
| 2 | L2 | &C03/18.1 | BA30_BA01_L2 | Main Output (Busbar) - L2 Voltage |
| 3 | L3 | &C03/18.1 | BA30_BA01_L3 | Main Output (Busbar) - L3 Voltage |
| 4 | N | &C03/18.2 | BA30_BA01_N | Main Output (Busbar) - N Voltage |
| 5 | L1 | &C03/18.3 | BA30_BA02_L1 | Main Output (Customer) - L1 Voltage |
| 6 | L2 | &C03/18.3 | BA30_BA02_L2 | Main Output (Customer) - L2 Voltage |
| 7 | L3 | &C03/18.3 | BA30_BA02_L3 | Main Output (Customer) - L3 Voltage |
| 8 | N | &C03/18.4 | BA30_BA02_N | Main Output (Customer) - N Voltage |
| 9 | L1 | &C03/18.5 | BA30_BC01_L1 | Main Output (Busbar) - L1 Current |
| 10 | L1-S2 | &C03/18.5 | CH1-S2 | Channel 1 - S2 |
| 11 | L2 | &C03/18.6 | BA30_BC01_L2 | Main Output (Busbar) - L2 Current |
| 12 | L2-S2 | &C03/18.6 | CH2-S2 | Channel 2 - S2 |
| 13 | L3 | &C03/18.7 | BA30_BC01_L3 | Main Output (Busbar) - L3 Current |
| 14 | L3-S2 | &C03/18.8 | CH3-S2 | Channel 3 - S2 |
| 15 | 4-S1 | | CH4-S1 | Channel 4 - S1 |
| 16 | 4-S2 | | CH4-S2 | Channel 4 - S2 |

## -Slot3
&C03/32.2
&C03/49.2
&C03/19.3
&C03/19.2
&C03/20.2
IOM3.1
Input Output Module 3.1

IOM3.1

| | | | | | |
|---|---|---|---|---|---|
| 3 1 2 | 1 | DO1.1 | &C03/32.2 | UC31_QA40_O | Precharge contactor coil |
| | 2 | R1 COM | &C03/32.2 | | Relay 1 Common |
| | 3 | DO1.2 | | | Relay 1 NC |
| 6 4 5 | 4 | DO2.1 | &C03/49.2 | DA03_EA01 | Container lighting |
| | 5 | R2 COM | &C03/49.2 | | Relay 2 Common |
| | 6 | DO2.2 | | | Relay 2 NC |
| 9 7 8 | 7 | DO3.1 | | | Relay 3 NO |
| | 8 | R3 COM | | | Relay 3 Common |
| | 9 | DO3.2 | | | Relay 3 NC |
| 12 10 11 | 10 | DO4.1 | | | Relay 4 NO |
| | 11 | R4 COM | | | Relay 4 Common |
| | 12 | DO4.2 | | | Relay 4 NC |
| | 13 | DIO1 | &C03/19.3 | UC31_RB01_BAT | 20ft PLC UPS Battery Operation |
| | 14 | DIO2 | &C03/19.2 | UC31_RB01_DIS | 20ft PLC UPS Battery Discharged |
| | 15 | DIO3 | &C03/19.4 | UC31_RB01_RDY | 20ft PLC UPS Battery Ready |
| | 16 | DIO4 | &C03/20.3 | UC31_RB02_BAT | 20ft Breaker UPS Battery Operation |
| | 17 | DIO5 | &C03/20.2 | UC31_RB02_DIS | 20ft Breaker UPS Battery Discharged |
| | 18 | DIO6 | &C03/20.4 | UC31_RB02_RDY | 20ft Breaker UPS Battery Ready |
| | 19 | DIO7 | &C03/32.6 | UC31_FC40_I | Precharge MCCB feedback |
| | 20 | DIO8 | &C03/32.5 | UC31_QA40_I | Precharge contactor feedback |
| | 21 | DIO9 | | | Spare |
| | 22 | DIO10 | | | Spare |
| | 23 | COM | &C03/26.3 | | Supply COM |

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C02 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Container Controller, 20ft Rack 1/3 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 5 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01+UC31-KE06
DEIF AMC300
Controller Extension Rack

## -Slot4
&C03/29.1
&C03/42.3
&C03/42.4
IOM3.2
IO Module 3.2

### IOM3.2

| | | | | |
|---|---|---|---|---|
| 1 | R1 COM | &C03/26.5 | | Relay 1 In |
| 2 | DO1 | &C03/29.1 | FC30_YO | Breaker FC30 Opening Coil |
| 3 | R2 COM | &C03/26.5 | | Relay 2 COM |
| 4 | DO2 | &C03/29.2 | FC30_YC | Breaker FC30 Closing Coil |
| 5 | R3 COM | &C03/26.5 | | Relay 3 In |
| 6 | DO3 | &C03/29.3 | FC30_RY | Breaker FC30 Trip Reset Coil |
| 7 | R4 COM | &C03/26.5 | | Relay 4 In |
| 8 | DO4 | &C03/29.4 | FC30_UR | Breaker FC30 Undervoltage Coil |
| 9 | AO1 | &C03/42.3 | JA01_QM07_SP | Intake Damper Position Setpoint |
| 10 | AO1 COM | &C03/42.3 | | AO1 COM |
| 11 | AO2 | &C03/42.5 | JA01_QM08_SP | Outlet Damper Position Setpoint |
| 12 | AO2 COM | &C03/42.5 | | AO2 COM |
| 13 | AO3 | | | Spare |
| 14 | AO3 COM | | | AO3 COM |
| 15 | AO4 | | | Spare |
| 16 | AO4 COM | | | AO4 COM |
| 17 | DI1 | &C03/29.5 | FC30_SPR | Breaker Sping Charge FB |
| 18 | DI2 | &C03/29.6 | FC30_Q1 | Breaker Auxillary Contact Q1 |
| 19 | DI3 | &C03/29.7 | FC30_Q2 | Breaker Auxillary Contact Q2 |
| 20 | DI4 | | | Spare |
| 21 | DI1-4 COM | &C03/26.5 | | DI1-4 COM |
| 22 | AI1 | &C03/42.4 | JA01_QM07_FB | Damper Position Feedback |
| 23 | AI1 COM | &C03/42.4 | | AI1 COM |
| 24 | AI2 | &C03/42.6 | JA01_QM08_FB | Outlet Damper Position Feedback |
| 25 | AI2 COM | &C03/42.6 | | AI2 COM |
| 26 | AI3 | | | Spare |
| 27 | AI3 COM | | | AI3 COM |
| 28 | AI4 | | | Spare |
| 29 | AI4 COM | | | AI4 COM |

## -Slot5
&C03/31.2
&C03/30.8
IOM3.2
IO Module 3.2

### IOM3.2

| | | | | |
|---|---|---|---|---|
| 1 | R1 COM | &C03/26.6 | | Relay 1 In |
| 2 | DO1 | &C03/31.2 | UC31_EA01_FAN | 20ft Heater Fan Enable |
| 3 | R2 COM | &C03/26.6 | | Relay 2 COM |
| 4 | DO2 | &C03/31.4 | UC31_EA01_HTR | 20ft Heater Enable |
| 5 | R3 COM | | | Relay 3 In |
| 6 | DO3 | | | Breaker FC30 Trip Reset Coil |
| 7 | R4 COM | | | Relay 4 In |
| 8 | DO4 | | | Battery Simulator Enable |
| 9 | AO1 | | | Spare |
| 10 | AO1 COM | | | AO1 COM |
| 11 | AO2 | | | Spare |
| 12 | AO2 COM | | | AO2 COM |
| 13 | AO3 | | | Spare |
| 14 | AO3 COM | | | AO3 COM |
| 15 | AO4 | | | Spare |
| 16 | AO4 COM | | | AO4 COM |
| 17 | DI1 | &C03/30.8 | IAH_05 | MCCB Trip Indication AC Customer |
| 18 | DI2 | | | Breaker Auxillary Contact Q1 |
| 19 | DI3 | | | Breaker Auxillary Contact Q2 |
| 20 | DI4 | | | Spare |
| 21 | DI1-4 COM | &C03/26.6 | | DI1-4 COM |
| 22 | AI1 | | | Spare |
| 23 | AI1 COM | | | AI1 COM |
| 24 | AI2 | | | Spare |
| 25 | AI2 COM | | | AI2 COM |
| 26 | AI3 | | | Spare |
| 27 | AI3 COM | | | AI3 COM |
| 28 | AI4 | | | Spare |
| 29 | AI4 COM | | | AI4 COM |

## -Slot6
&C03/30.1
IOM3.2
IO Module 3.2

### IOM3.2

| | | | | |
|---|---|---|---|---|
| 1 | R1 COM | | | Relay 1 In |
| 2 | DO1 | | | Relay 1 out |
| 3 | R2 COM | | | Relay 2 COM |
| 4 | DO2 | | | Relay 2 Out |
| 5 | R3 COM | | | Relay 3 In |
| 6 | DO3 | | | Relay 3 Out |
| 7 | R4 COM | | | Relay 4 In |
| 8 | DO4 | | | Relay 4 Out |
| 9 | AO1 | | | Spare |
| 10 | AO1 COM | | | AO1 COM |
| 11 | AO2 | | | Spare |
| 12 | AO2 COM | | | AO2 COM |
| 13 | AO3 | | | Spare |
| 14 | AO3 COM | | | AO3 COM |
| 15 | AO4 | | | Spare |
| 16 | AO4 COM | | | AO4 COM |
| 17 | DI1 | &C03/30.1 | IAH_01 | MCCB Trip Indication PSU |
| 18 | DI2 | &C03/30.3 | IAH_02 | MCCB Trip Indication Heating |
| 19 | DI3 | &C03/30.5 | IAH_03 | MCCB Trip Indication Battery |
| 20 | DI4 | &C03/30.6 | IAH_04 | MCCB Trip Indication AC Busbar |
| 21 | DI1-4 COM | &C03/26.7 | | DI1-4 COM |
| 22 | AI1 | | | Spare |
| 23 | AI1 COM | | | AI1 COM |
| 24 | AI2 | | | Spare |
| 25 | AI2 COM | | | AI2 COM |
| 26 | AI3 | | | Spare |
| 27 | AI3 COM | | | AI3 COM |
| 28 | AI4 | | | Spare |
| 29 | AI4 COM | | | AI4 COM |

| | | | |
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| Reference Item Number | Ballard Part # TBD | | |
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| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 6 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01+UC31-KE06
DEIF AMC300
Controller Extension Rack

-Slot7
&C03/45.2
&C03/46.1
&C03/46.5
IOM3.3
IO Module 3.3

IOM3.3

| | | | | |
|---|---|---|---|---|
| 1 | AI1 | | | Spare |
| 2 | AI2 | &C03/45.2 | HE03_BF02_FT | LT Coolant Flow Auxillary Sensor |
| 3 | AI3 | &C03/45.2 | | Spare |
| 4 | AI4 | | | Spare |
| 5 | AI5 | &C03/45.3 | HE03_BF02_TT | LT Coolant 20ft Temperature |
| 6 | AI6 | &C03/45.3 | | Spare |
| 7 | AI7 | &C03/45.4 | HE03_BT07_TT | LT Coolant 20ft Forward |
| 8 | AI8 | &C03/45.4 | | LT Coolant 20ft Forward |
| 9 | AI9 | &C03/45.4 | | Spare |
| 10 | AI10 | &C03/46.1 | DA03_BT01 | Container temperature |
| 11 | AI11 | &C03/46.1 | | Spare |
| 12 | AI12 | &C03/46.1 | | Spare |
| 13 | AI13 | | TA30_U_TT | TA30 U Primary Temp |
| 14 | AI14 | | | Spare |
| 15 | AI15 | | | Spare |
| 16 | AI16 | | TA30_V_TT | TA30 V Primary Temp |
| 17 | AI17 | | | Spare |
| 18 | AI18 | | | Spare |
| 19 | AI19 | | TA30_W_TT | TA30 W Primary Temp |
| 20 | AI20 | | | Spare |
| 21 | AI21 | | | Spare |
| 22 | AI22 | | | Spare |
| 23 | AI23 | &C03/46.5 | DA03_BP01 | Container Diff. Pressure |
| 24 | AI24 | &C03/46.5 | | Spare |
| 25 | AI25 | | | Spare |
| 26 | AI26 | | | Spare |
| 27 | AI27 | | | Spare |
| 28 | AI28 | | | Spare |
| 29 | AI29 | | | Spare |
| 30 | AI30 | | | Spare |

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C02 |

| REVISION INFORMATION |
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| DESCRIPTION |
| |
| DATE |
| 29-Sep-25 |

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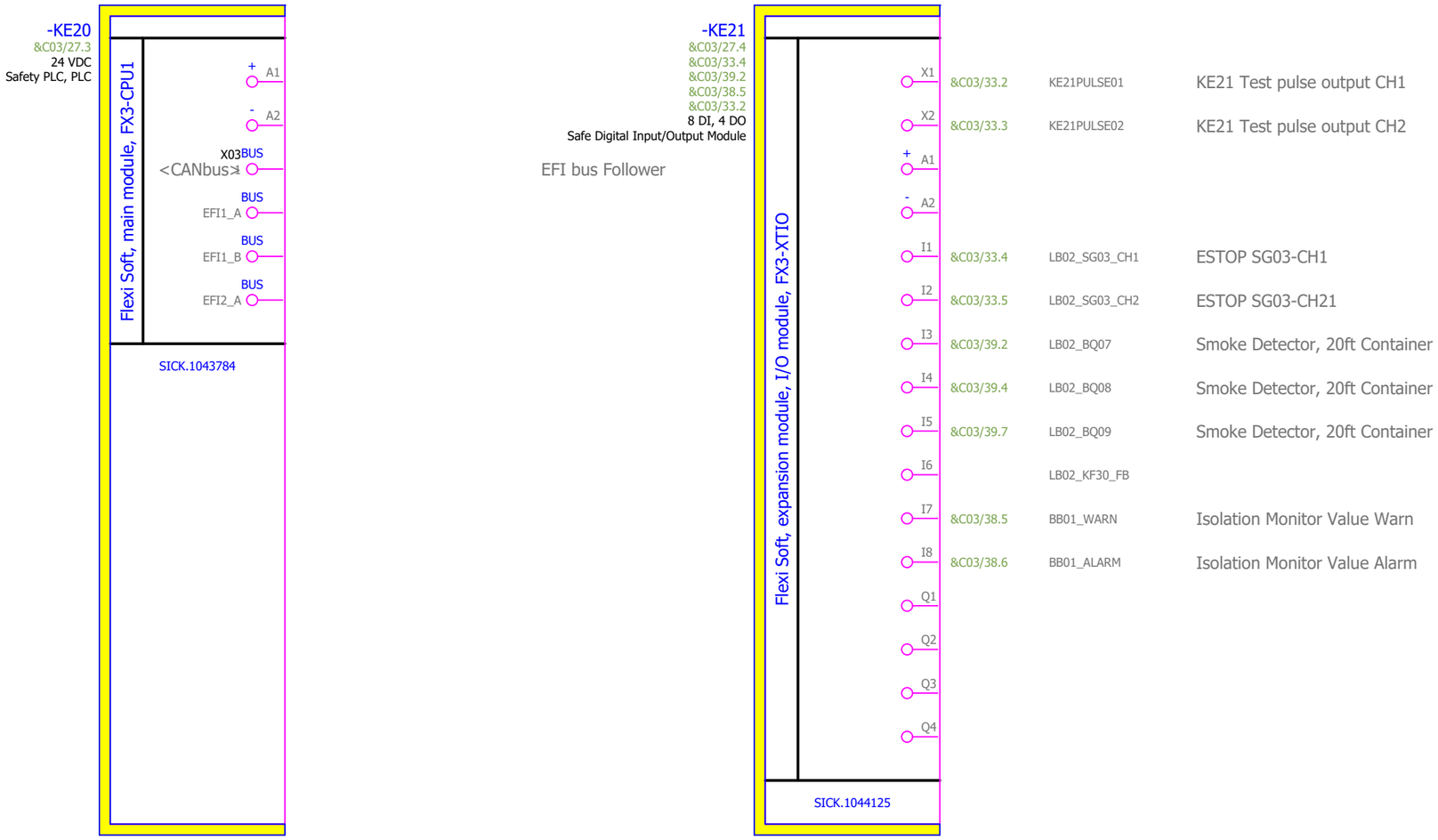
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Container Controller, 20ft Rack 3/3 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 7 / 81 |

FRM5103656/0B

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31
Container Safety System, Control Cabinet 20 ft




| | | | |
|---|---|---|---|
| &C03/33.2 | KE21PULSE01 | KE21 Test pulse output CH1 |
| &C03/33.3 | KE21PULSE02 | KE21 Test pulse output CH2 |
| &C03/33.4 | LB02_SG03_CH1 | ESTOP SG03-CH1 |
| &C03/33.5 | LB02_SG03_CH2 | ESTOP SG03-CH21 |
| &C03/39.2 | LB02_BQ07 | Smoke Detector, 20ft Container 1/3 |
| &C03/39.4 | LB02_BQ08 | Smoke Detector, 20ft Container 2/3 |
| &C03/39.7 | LB02_BQ09 | Smoke Detector, 20ft Container 3/3 |
| | LB02_KF30_FB | |
| &C03/38.5 | BB01_WARN | Isolation Monitor Value Warn |
| &C03/38.6 | BB01_ALARM | Isolation Monitor Value Alarm |

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Controller, 20ft Container 1/2 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 8 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31

Container Safety System, Control Cabinet 20 ft

## -KE22

&C03/27.5
&C03/34.3
&C03/35.4
&C03/37.1
&C03/36.3
&C03/34.3
&C03/35.4
&C03/36.1
8 DI, 4 DO
Safe Digital Input/Output Module

Flexi Soft, expansion module, I/O module, FX3-XTIO

SICK.1044125

| | | | | |
|---|---|---|---|---|
| X1 | | | | |
| X2 | | | | |
| + A1 | | | | |
| - A2 | | | | |
| I1 | &C03/37.3<br>&C03/34.3 | LB02_KF30_I | Safety Relay KF30 Feedback |
| I2 | &C03/37.4<br>&C03/35.4 | LB02_KF31_I | Safety Relay KF31 Feedback |
| I3 | &C03/37.1 | | Spare |
| I4 | | | Spare |
| I5 | &C03/36.3 | LB02_BG01_CH1 | Safety Door Sensor, Door A - CH1 |
| I6 | &C03/36.4 | LB02_BG01_CH2 | Safety Door Sensor, Door A - CH2 |
| I7 | &C03/36.6 | LB02_BG02_CH1 | Safety Door Sensor, Door B - CH1 |
| I8 | &C03/36.7 | LB02_BG02_CH2 | Safety Door Sensor, Door B - CH2 |
| Q1 | &C03/34.3<br>&C03/37.2 | LB02_KF30_Q | Safety Relay KF30 Coil |
| Q2 | &C03/35.4 | LB02_KF31_Q | Safety Relay KF31 Coil |
| Q3 | | | |
| Q4 | | | |

## Safety IO - Battery Pack

## -KE23

&C03/27.6
&C03/40.1
&C03/41.1

Flexi Soft, expansion module, I/O module, FX3-XTIO

SICK.1044125

| | |
|---|---|
| X1 | &C03/41.1 |
| X2 | &C03/41.2 |
| + A1 | |
| - A2 | |
| I1 | &C03/40.1 |
| I2 | &C03/40.2 |
| I3 | &C03/40.3 |
| I4 | &C03/40.4 |
| I5 | &C03/40.4 |
| I6 | &C03/40.5 |
| I7 | &C03/40.6 |
| I8 | &C03/40.7 |
| Q1 | &C03/41.4 |
| Q2 | &C03/41.5 |
| Q3 | &C03/41.6 |
| Q4 | &C03/41.7 |

| | | | |
|---|---|---|---|
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| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Controller, 20ft Container 2/2 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 9 / 81 |

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Ballard Power Systems Europe - Technology Solutions

Multiline Documentation

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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| EPLAN Project Pages | 627 | | |
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| DATE | |
| 29-Sep-25 | |

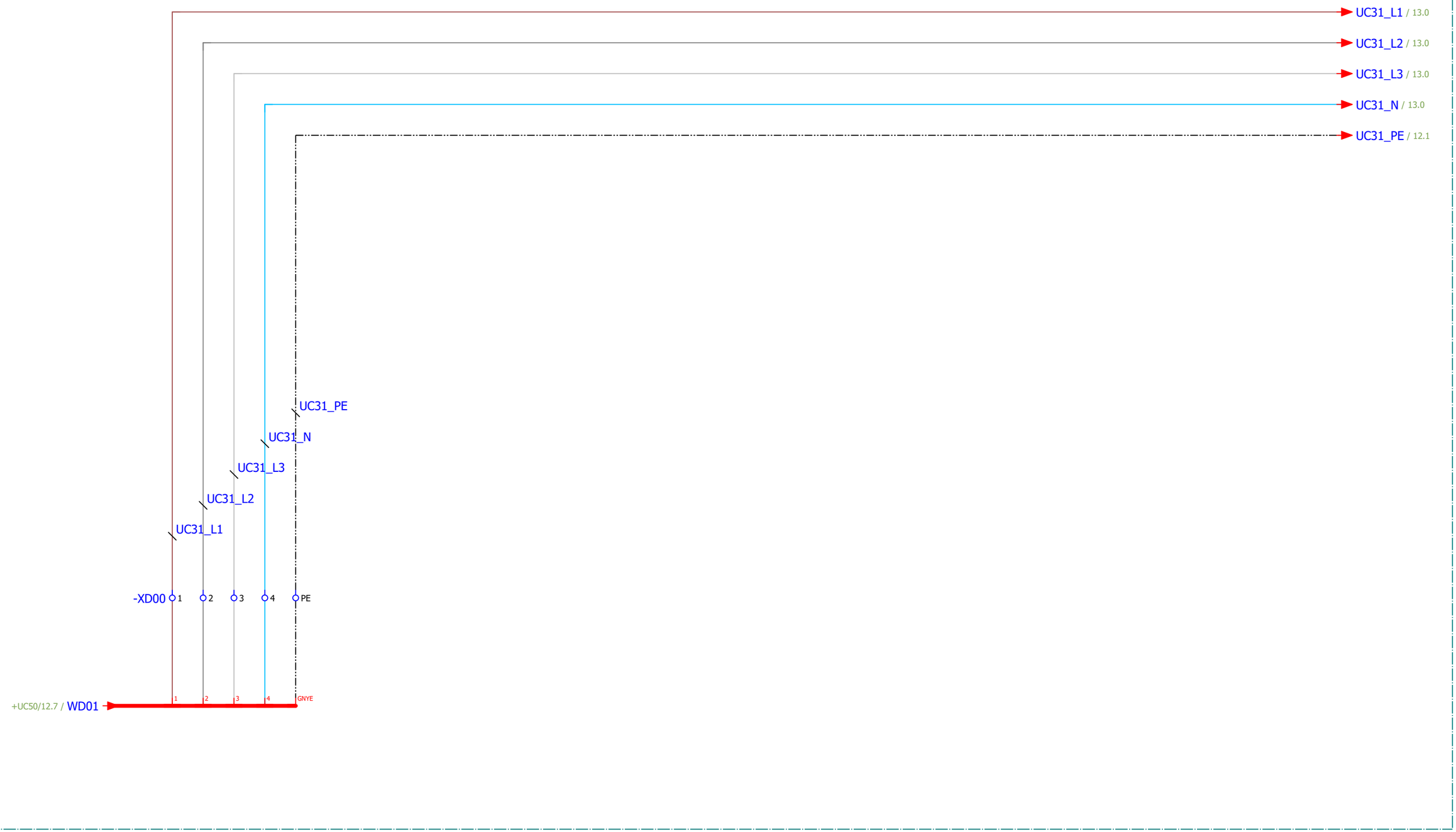
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Multiline Documentation Intro | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 10 / 81 |

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| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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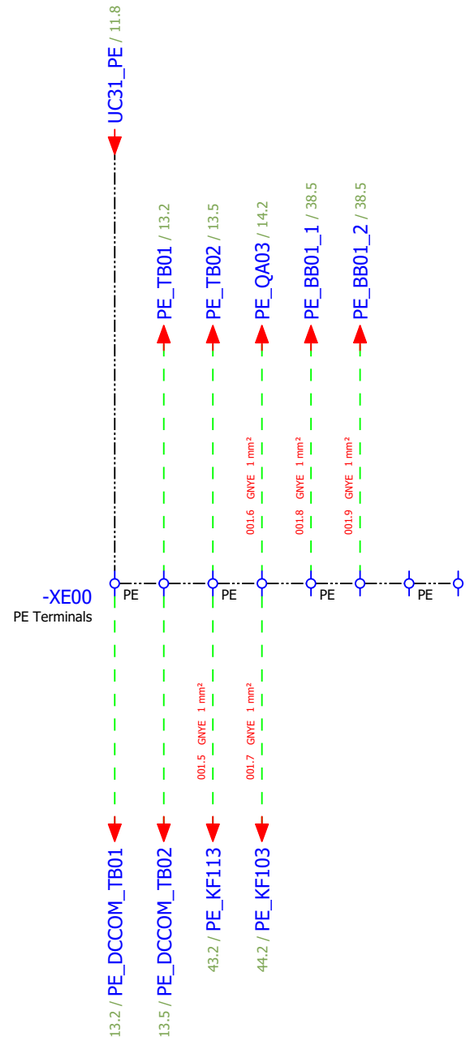
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC Input | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 11 / 81 |

FRM5103656/0B

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| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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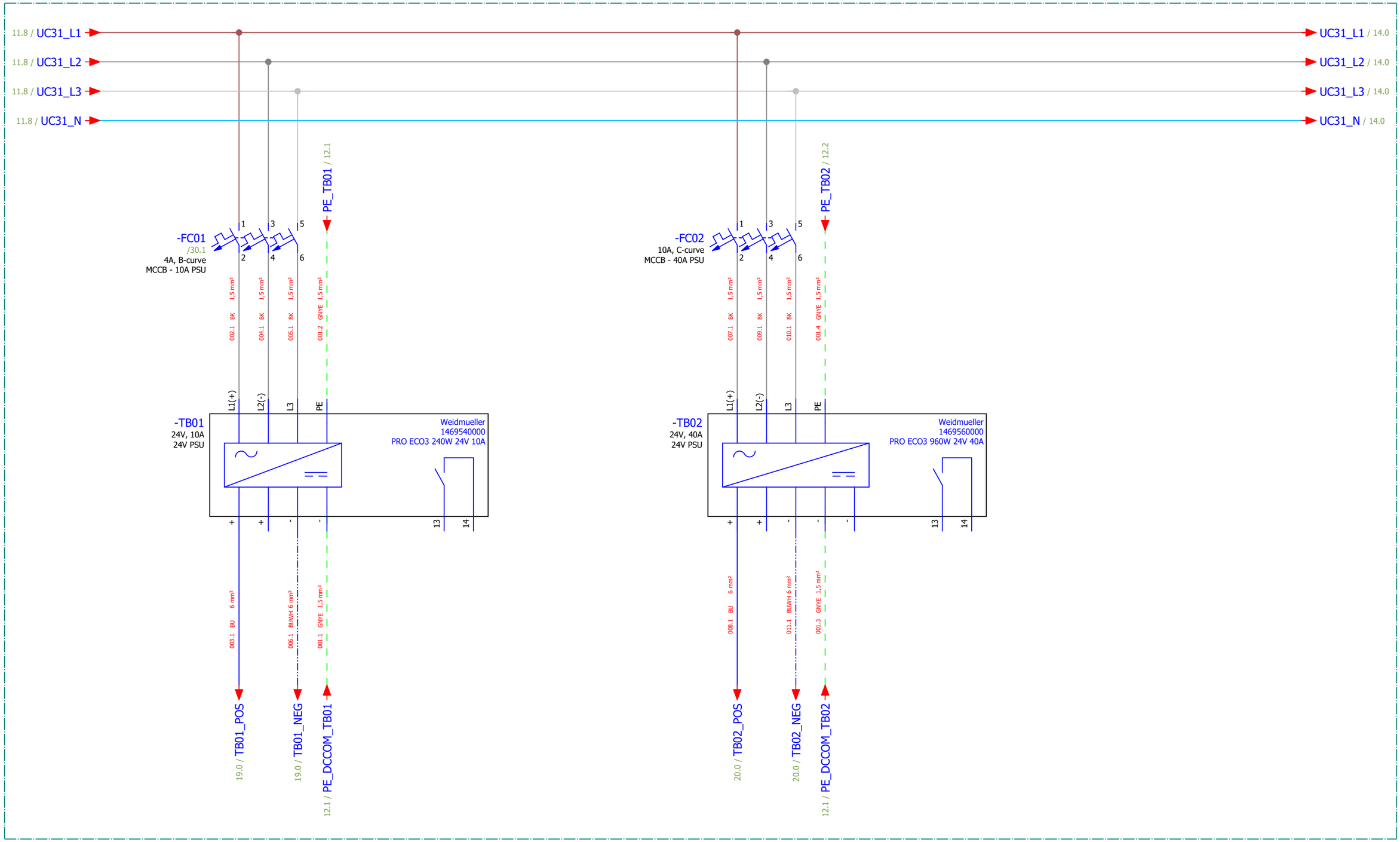
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | PE Distribution | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 12 / 81 |

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - 24V Power Supplies | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 13 / 81 |

=LA01

13.8 / UC31_L1 → UC31_L1 / 15.0
13.8 / UC31_L2 → UC31_L2 / 15.0
13.8 / UC31_L3 → UC31_L3 / 15.0
13.8 / UC31_N → UC31_N / 15.0

PE_QA03 / 12.2

-FC03
/30.3
16A, B-curve
MCCB - 10ft Heating Fan

-FC04
/30.3
10A, B-curve
MCCB - 10ft Ventilation Fan

PE_QA03 /

-QA03
/31.4

-QA01
/31.2
Heater Fan Contactor

012.1 BK 1,5 mm²
014.1 BK 1,5 mm²
016.1 BK 1,5 mm²
001.6 GNYE 1,5 mm²
021.1 BK 1,5 mm²
013.1 BK 1,5 mm²
015.1 BK 1,5 mm²
017.1 BK 1,5 mm²
021.2 BK 1,5 mm²
022.2 BK 1,5 mm²
018.1 BK 1,5 mm²
019.1 BK 1,5 mm²
020.1 BK 1,5 mm²
001.6 GNYE 1,5 mm²

-XD01 1 2 3 4 PE 5 6 7 8 9 PE

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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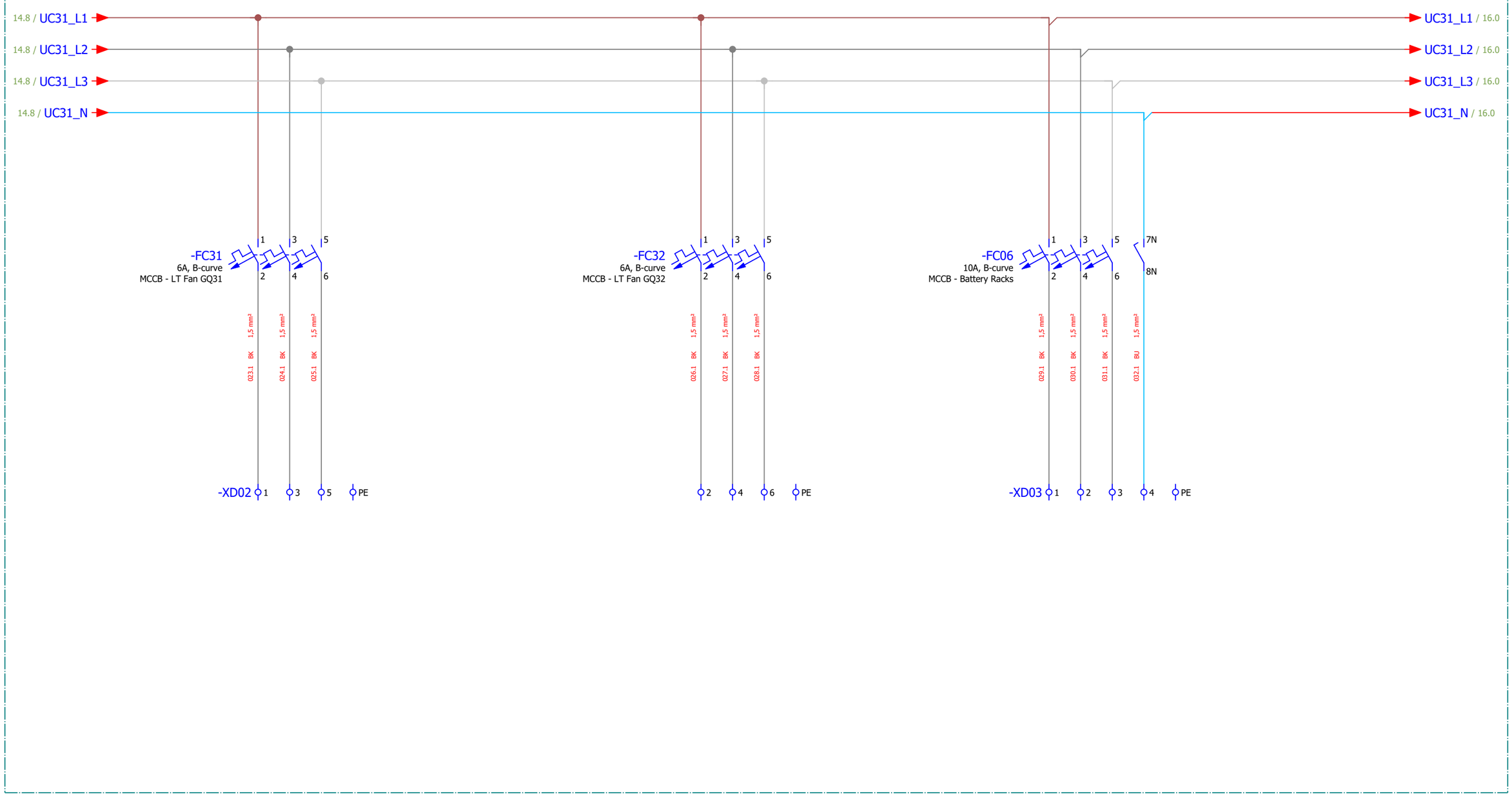
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - Container Heating | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 14 / 81 |

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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| EPLAN Project Pages | 627 | | |
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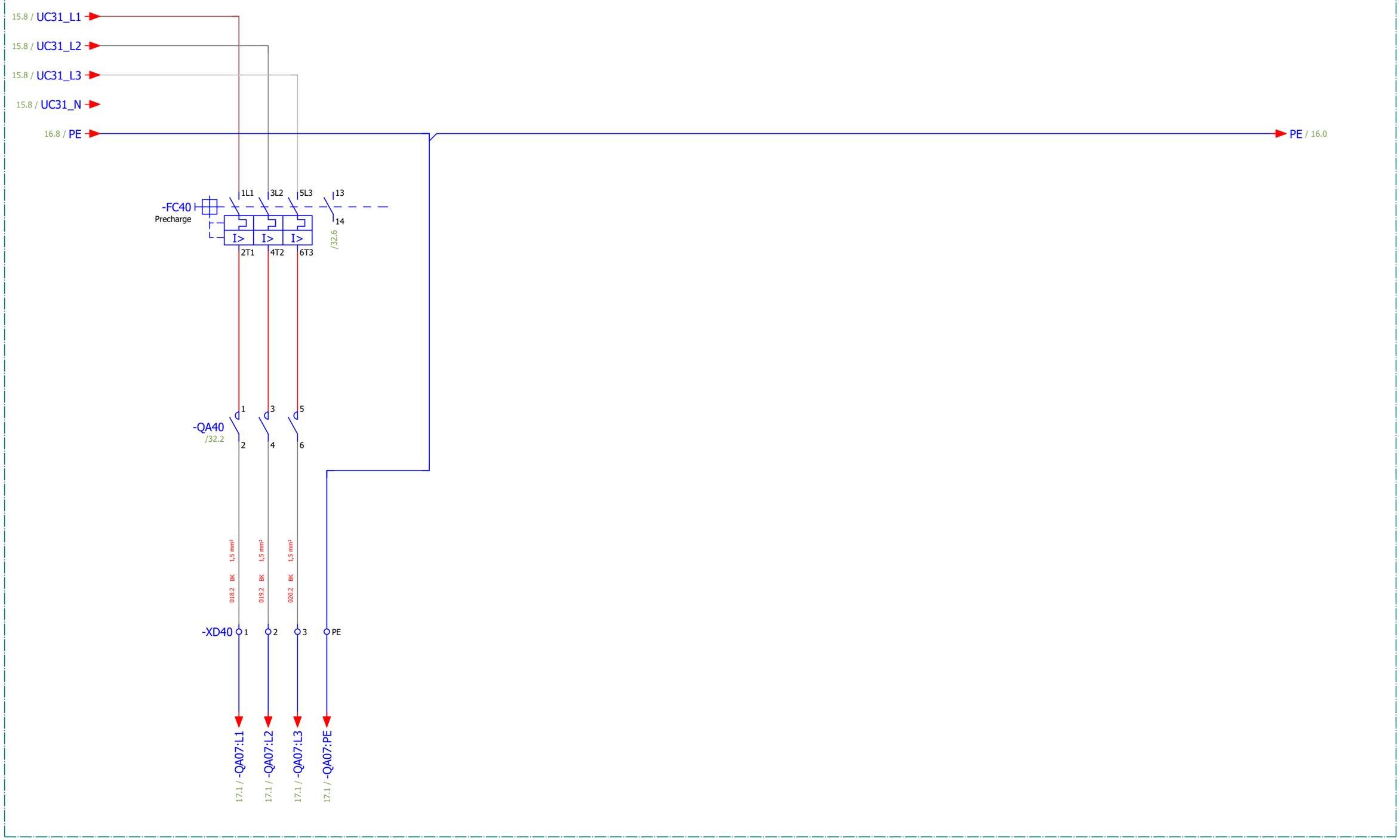
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - LT Fans | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 15 / 81 |

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| | | | |
|---|---|---|---|
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - Precharge | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 16 / 81 |

=BA30

16.1 / >=LA01+UC31-QA07:L1
16.1 / >=LA01+UC31-QA07:L2
16.2 / >=LA01+UC31-QA07:L3
16.2 / >=LA01+UC31-QA07:PE

-TA40-WD01
ÖLFLEX® CLASSIC 130 H BK 0,6/1 kV
4x2,5
0,6/1,0 kV
Precharge transformer supply
1 2 3 GNYE

-TA40
Precharge Isolation Trafo
U V W PE
PRI
BLOCK
TT3 2,5-4-4
SEC
380U 380V 380W 400U 400V 400W 420U 420V 420W N

-TB40-WD01
ÖLFLEX® CLASSIC 130 H BK 0,6/1 kV
4x2,5
0,6/1,0 kV
Precharge Rectifier Supply
BN BK GY
BN BK GY

BN BK GY
-TB40
3p Diode Bridge
- +
-RA40.1
3.3Ω, 1000W
-RA40.2
3.3Ω, 1000W
-XD41 1 2
-RA40.3
3.3Ω, 1000W
-RA40.4
3.3Ω, 1000W
-FC41
20 A
1 1
>=BA20+DA03-WD01:1
>=BA20+DA03-WD01:2

>=BA20+DA03-L+ / 38.7
>=BA20+DA03-L- / 38.8
-WD02
ÖLFLEX® CLASSIC 130 H BK 0,6/1 kV
4x2,5
0,6/1,0 kV
Isolation monitoring
BN BK
-FC42
2 A
1 1
3
4

=BA30+
DC Bus

| | | | |
|---|---|---|---|
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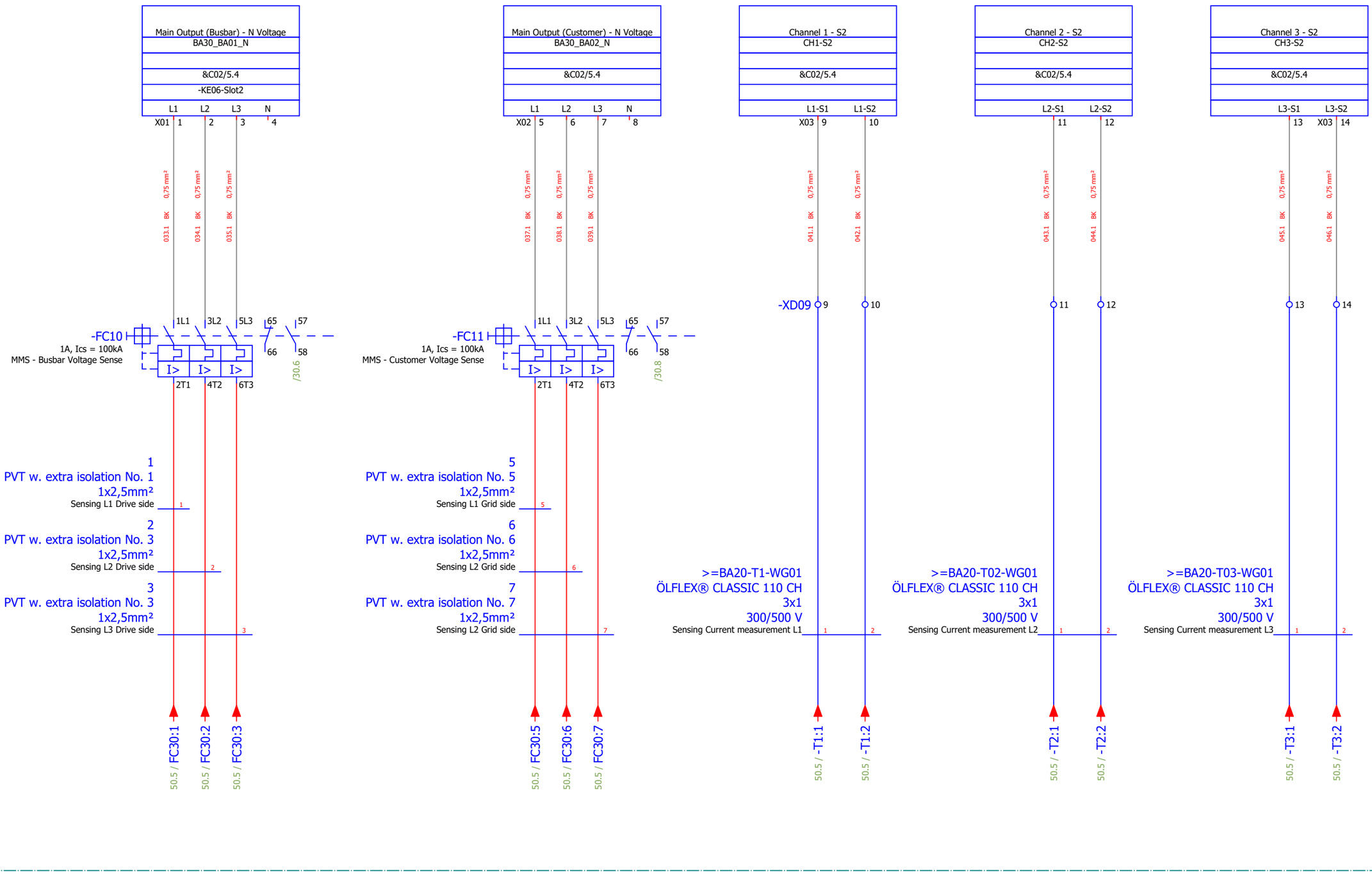
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| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - Precharge | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 17 / 81 |

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
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| DATE | 29-Sep-25 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - Sensing | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 18 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01+UC31

=LA01+UC31
Main Breaker Cabinet

20ft PLC UPS Battery Discharged
UC31_RB01_DIS
&C02/5.7
-KE06-Slot3
DIO2
X02 14

20ft PLC UPS Battery Operation
UC31_RB01_BAT
&C02/5.7
-KE06-Slot3
DIO1
X02 13

20ft PLC UPS Battery Ready
UC31_RB01_RDY
&C02/5.7
DIO3
15

TB01_POS / 13.1
TB01_NEG / 13.2

052.1 WH 0,5 mm²
055.1 WH 0,5 mm²
056.1 WH 0,5 mm²
049.1 BU 6 mm²
050.1 BUWH 6 mm²

-RB01
24V, 10A
24V UPS Module
IN + IN - Input
B+ B- Battery
12 14 22 24 32 34
Alarm Buffering Charging
10A 20A
INV3 INV4 INV5 Temp.
H L
Time 0.5-45 min
Acid 1.3-17 Ah
Weidmüller CP DC UPS

Output OUT + OUT -
Interlock + Interlock - 1 2
Alarm 3
Buffering Charging 4 5
Temperature Sensor 6 7
11 21 31

-XD06
1
2

-CA01
PULS
Battery Module, 24V, 12Ah
UZK24.121
DC 24V
Out + Out -
PT100 Temp. Sensor 11
PT100 Temp. Sensor 12
Battery Center Tap 13

Battery Supply RB01
300/500 V
3x2,5
ÖLFLEX® CLASSIC 110 CH
-CA01-WD01

054.1 BU 0,5 mm² 054.3 BU 0,5 mm² 054.4 BU 0,5 mm² → 24V_DI4_2 / 20.2

047.1 BU 6 mm²
048.1 BUWH 6 mm²
051.1 VT 0,5 mm²
053.1 VT 0,5 mm²
054.2 BU 0,5 mm²

5 WH
6 BN

Battery Tempereature CA01
300/500 V
4x0,5
UNITRONIC®-FD CP (TP) PLUS
-CA01-WG01

21.2 / RB01_POS
21.0 / RB01_NEG
23.2 / 24V_DI4

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
| | |
| DATE | 29-Sep-25 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 10A UPS Module | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 19 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01

=LA01+UC31
Main Breaker Cabinet

20ft Breaker UPS Battery Discharged
UC31_RB02_DIS
&C02/5.7
-KE06-Slot3
DIO5
X02 17

20ft Breaker UPS Battery Operation
UC31_RB02_BAT
&C02/5.7
DIO4
16

20ft Breaker UPS Battery Ready
UC31_RB02_RDY
&C02/5.7
DIO6
18

TB02_POS / 13.4
TB02_NEG / 13.5

062.1 WH 0,5 mm²
064.1 WH 0,5 mm²
065.1 WH 0,5 mm²
059.1 BU 6 mm²
060.1 BUWH 6 mm²

-RB02
24V, 40A
40A UPS Module
IN + IN - Input
B+ B- Battery
12 14 22 24 32 34
Alarm Buffering Charging
Weidmüller CP DC UPS
INV3 INV4 INV5 Temp.
H L
Time 0.5-45 min
Acid 1.3-17 Ah
Output
OUT + OUT -
Interlock + Interlock - 1 2
Alarm 3
Buffering Charging 4 5
Temperature Sensor 6 7
11 21 31

-XD06
3
4

-CA02
PULS
Battery Module, 24V, 12Ah
UZK24.121
DC 24V
Out + Out -
PT100 Temp. Sensor 11
PT100 Temp. Sensor 12
Battery Center Tap 13

1
2
Battery Supply RB02
300/500 V
3x2,5
ÖLFLEX® CLASSIC 110 CH
-CA02-WD01

054.5 BU 0,5 mm²
054.6 BU 0,5 mm²
061.1 VT 0,5 mm²
063.1 VT 0,5 mm²
057.1 BU 6 mm²
058.1 BUWH 6 mm²

7
8
WH
BN
Battery Tempereature CA02
300/500 V
4x0,5
UNITRONIC®-FD CP (TP) PLUS
-CA02-WG01

28.5 / 24V_FC30
28.5 / DCCOM_FC30
19.4 / 24V_DI4_2

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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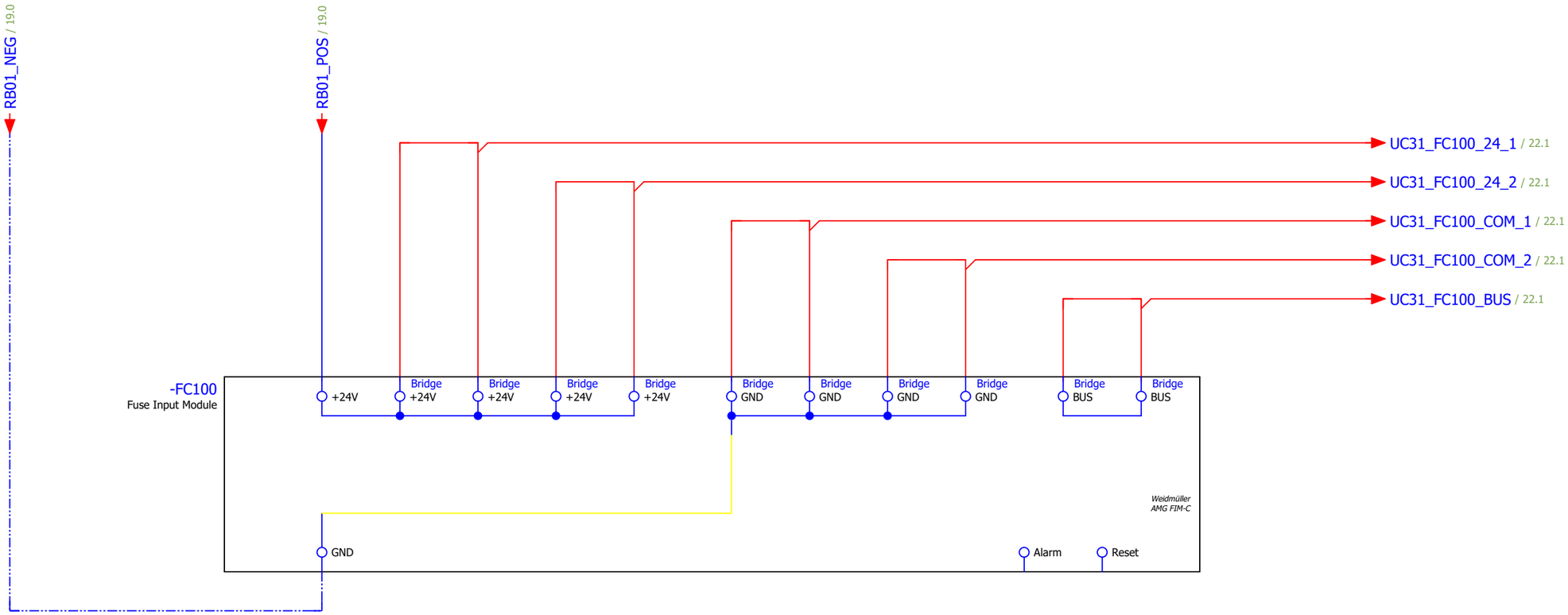
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 40A UPS Module | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 20 / 81 |

FRM5103656/0B

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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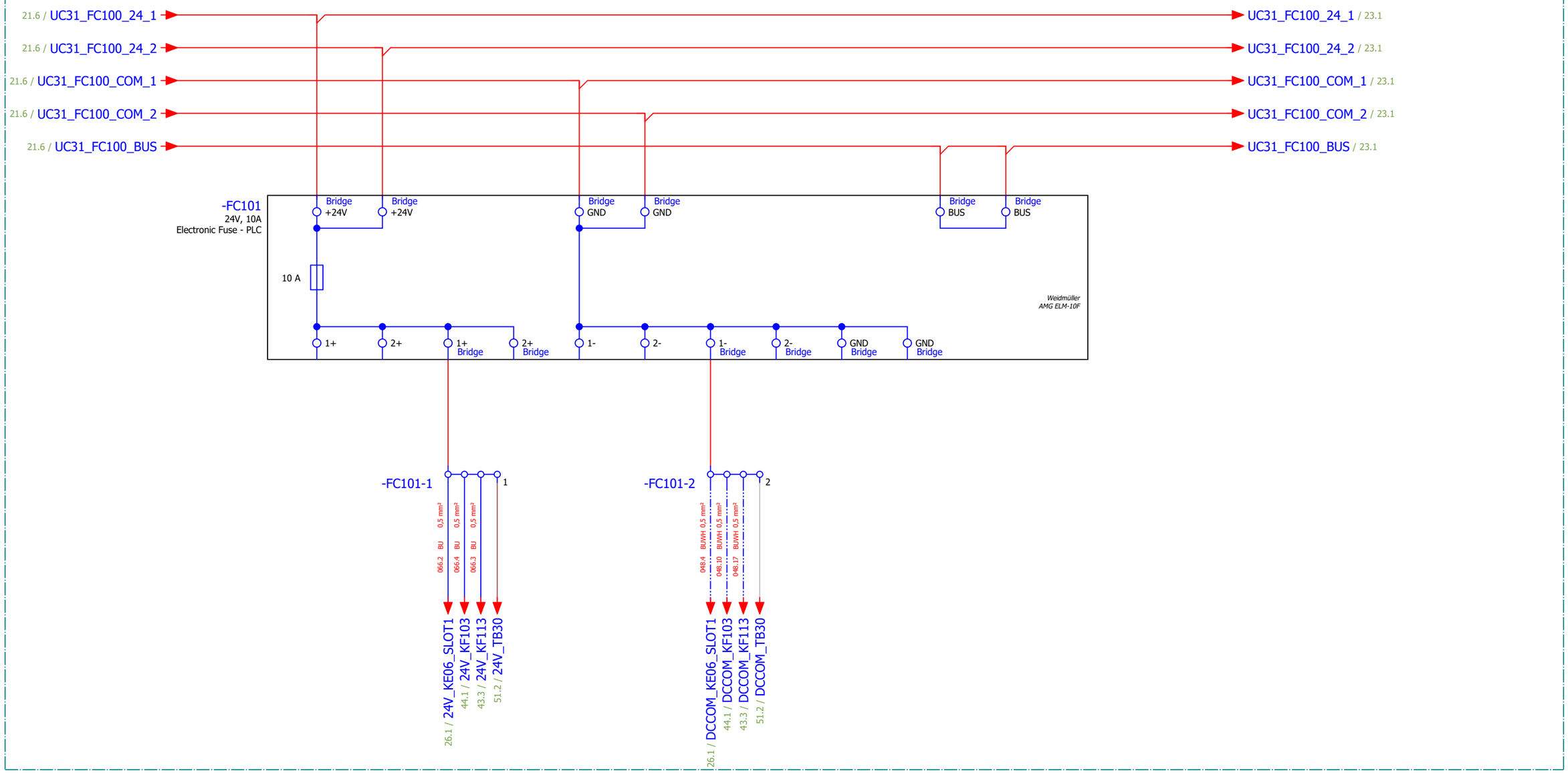
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 24V Fusing - FC100 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 21 / 81 |

FRM5103656/0B

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01




| | |
|---|---|
| Reference Item Number | Ballard Part # TBD |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub |
| EPLAN Revision | 12 |
| EPLAN Project Pages | 627 |
| = | ++ \| + UC31 \| & C03 |

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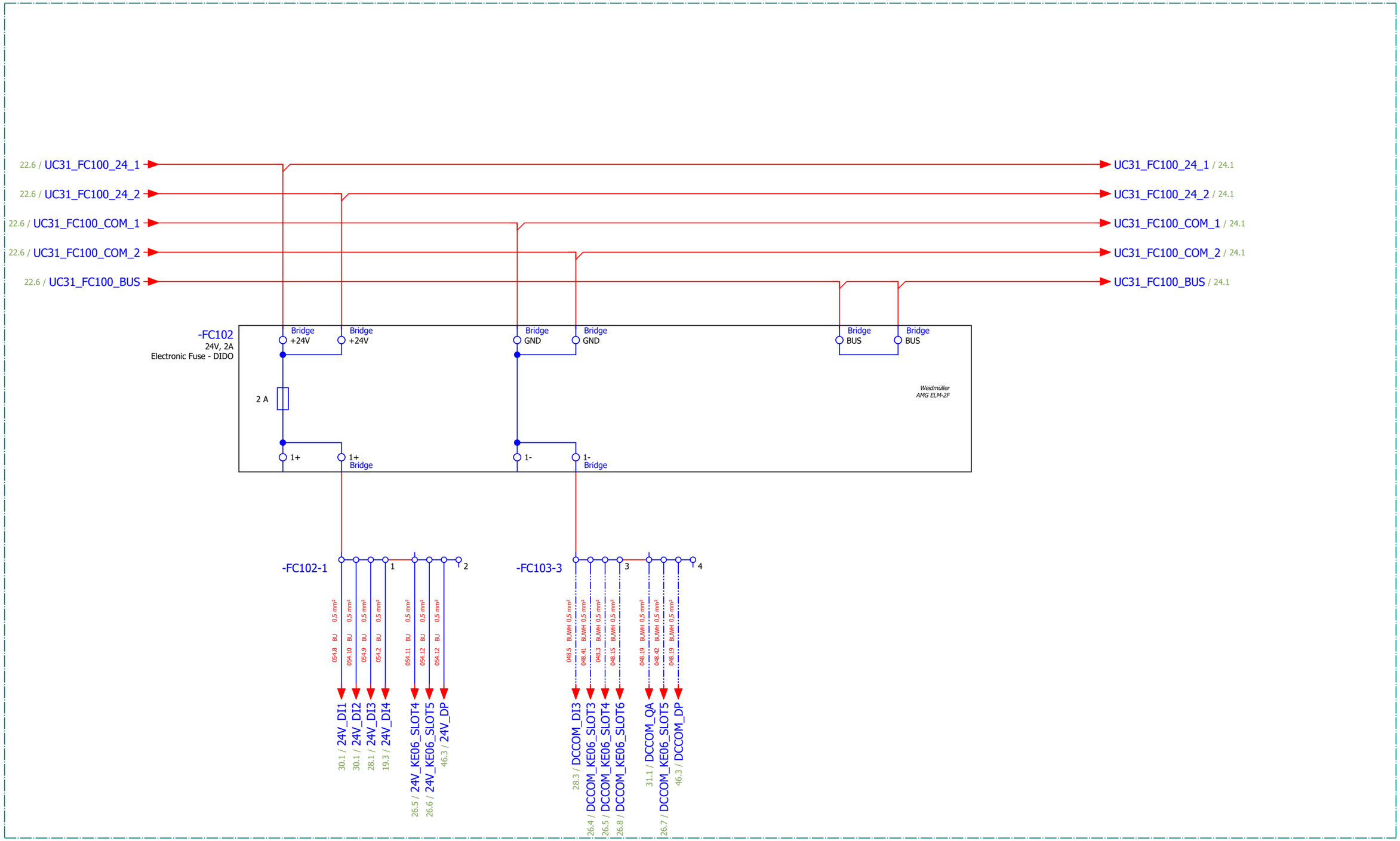
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 24V Fusing and Distribution - FC101 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 22 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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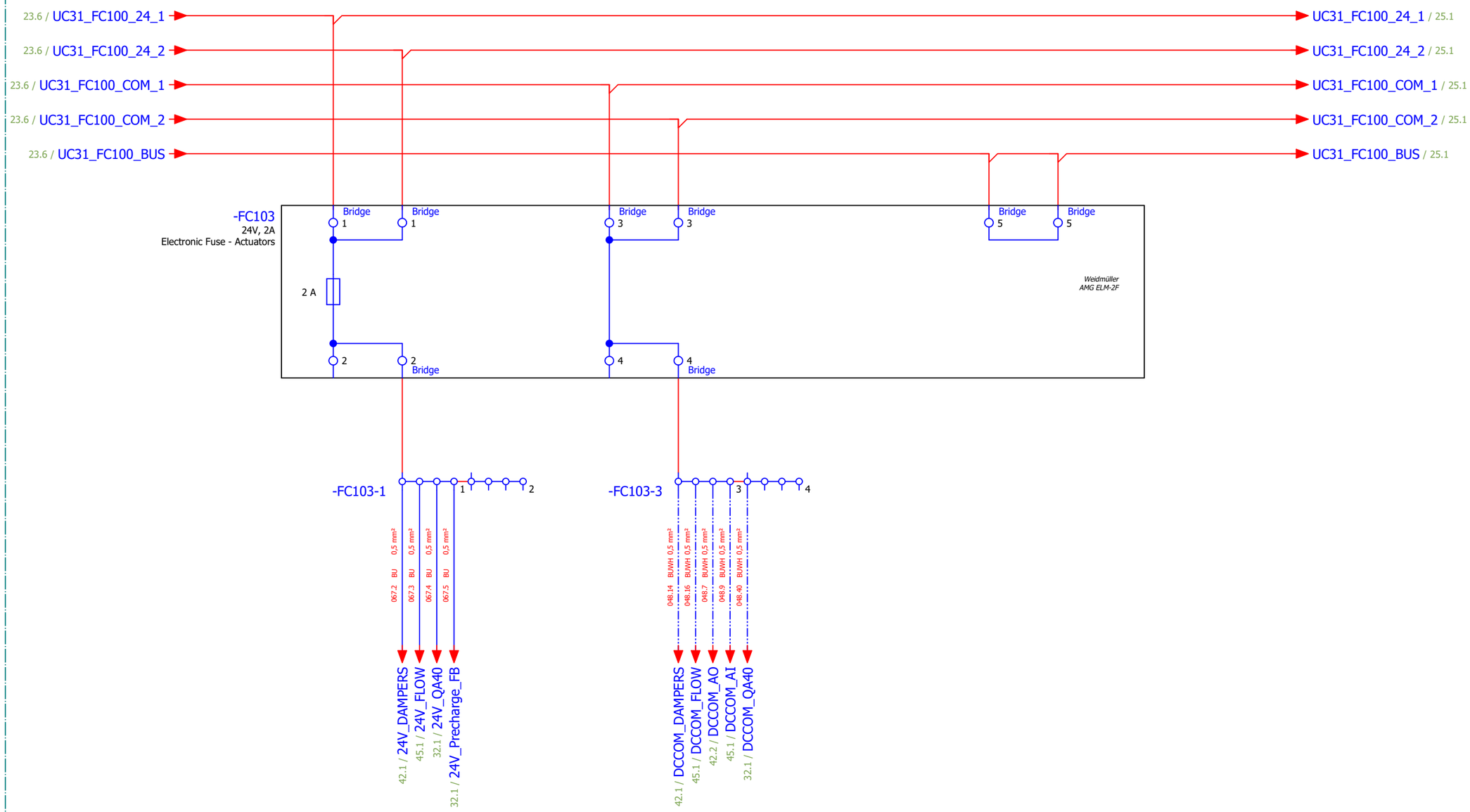
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 24V Fusing and Distribution - FC102 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 23 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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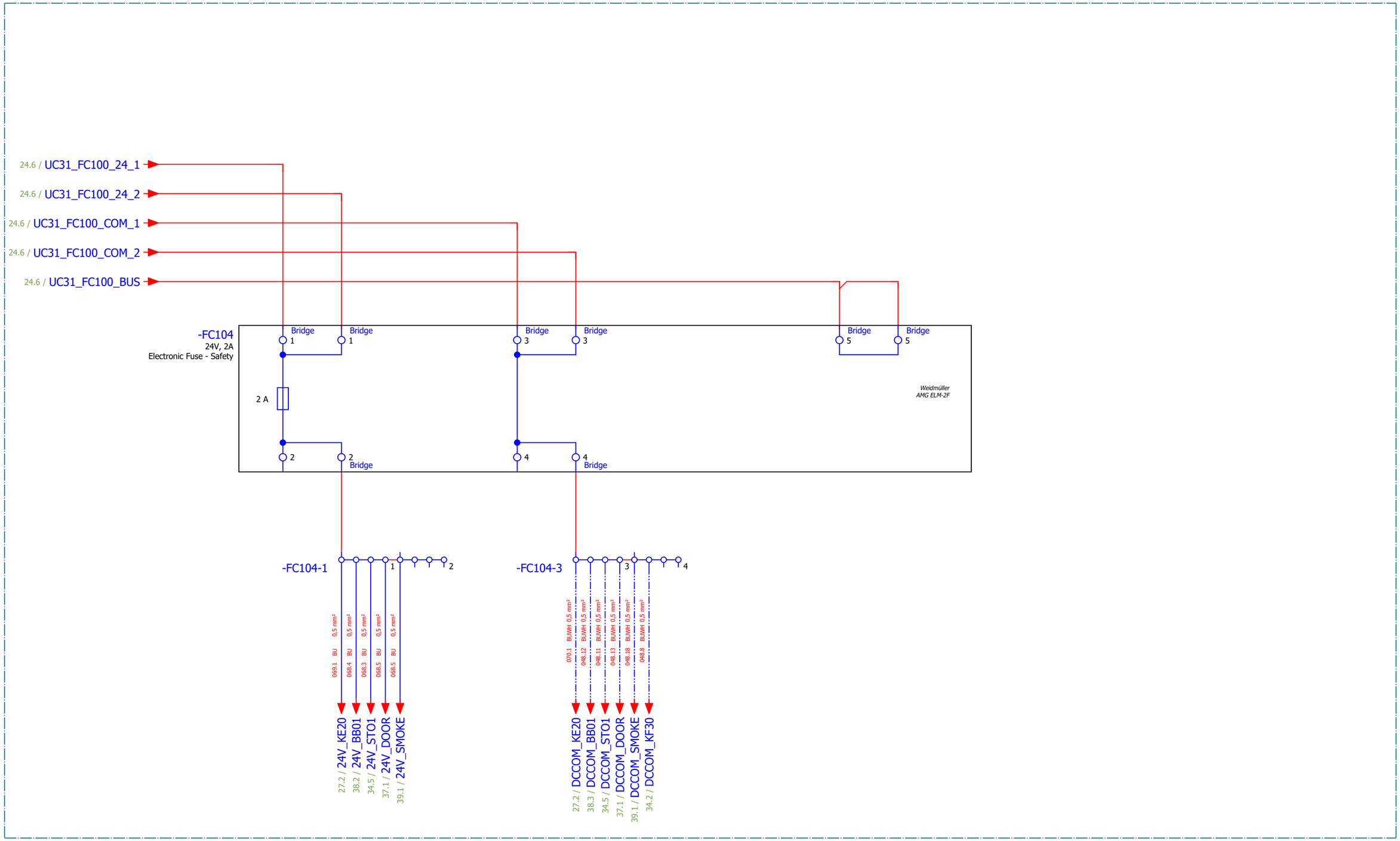
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 24V Fusing and Distribution - FC103 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 24 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 24V Fusing and Distribution - FC104 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 25 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01

-KE06
DEIF AMC300
Controller Extension Rack

-Slot1
DEIF PSM3.2

PE
PE
&C02/5.1

12-24V
1
&C02/5.1

0V
2
&C02/5.1

-Slot3

-Slot4

R1 COM
1
Relay 1 In &C02/6.1

R2 COM
3
Relay 2 COM &C02/6.1

R3 COM
5
Relay 3 In &C02/6.1

R4 COM
7
Relay 4 In &C02/6.1

-Slot5

R1 COM
1
Relay 1 In &C02/6.4

R2 COM
3
Relay 2 COM &C02/6.4

-Slot6

DI1-4 COM
21
DI1-4 COM &C02/6.1

DI1-4 COM
21
DI1-4 COM &C02/6.4

DI1-4 COM
21
DI1-4 COM &C02/6.6

COM
23
Supply COM &C02/5.7

22.4 / DCCOM_KE06_SLOT1

22.2 / 24V_KE06_SLOT1

23.3 / DCCOM_KE06_SLOT3

23.2 / 24V_KE06_SLOT4

23.3 / DCCOM_KE06_SLOT4

23.2 / 24V_KE06_SLOT5

23.4 / DCCOM_KE06_SLOT5

23.4 / DCCOM_KE06_SLOT6

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | PLC - 24V | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 26 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01+UC20
From 40ft Container

=LB02+UC31
Safety System, 20ft Control Cabinet

25.2 / >=LA01-24V_KE20

25.3 / >=LA01-DCCOM_KE20

032.2 BU 0,5 mm²

034.2 BUWH 0,5 mm²

035.2 BU 0,5 mm²

036.2 BUWH 0,5 mm²

037.2 BU 0,5 mm²

038.2 BUWH 0,5 mm²

**-KE20**
&C02/8.0
24 VDC
Safety PLC, PLC
+ A1
- A2

**-KE21**
&C02/8.3
Safe Digital
Input/Output Module
+ A1
- A2

**-KE22**
&C02/9.1
Safe Digital
Input/Output Module
+ A1
- A2

**-KE23**
&C02/9.5
Safe Digital
Input/Output Module
+ A1
- A2

+UC20/46.8 / EFI_CAN

BN — 1 — X03 Other bus systems

WH — 2 — X03 Other bus systems

GN — 3 — X03 Other bus systems

YE — EFI2_B — Other bus systems

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

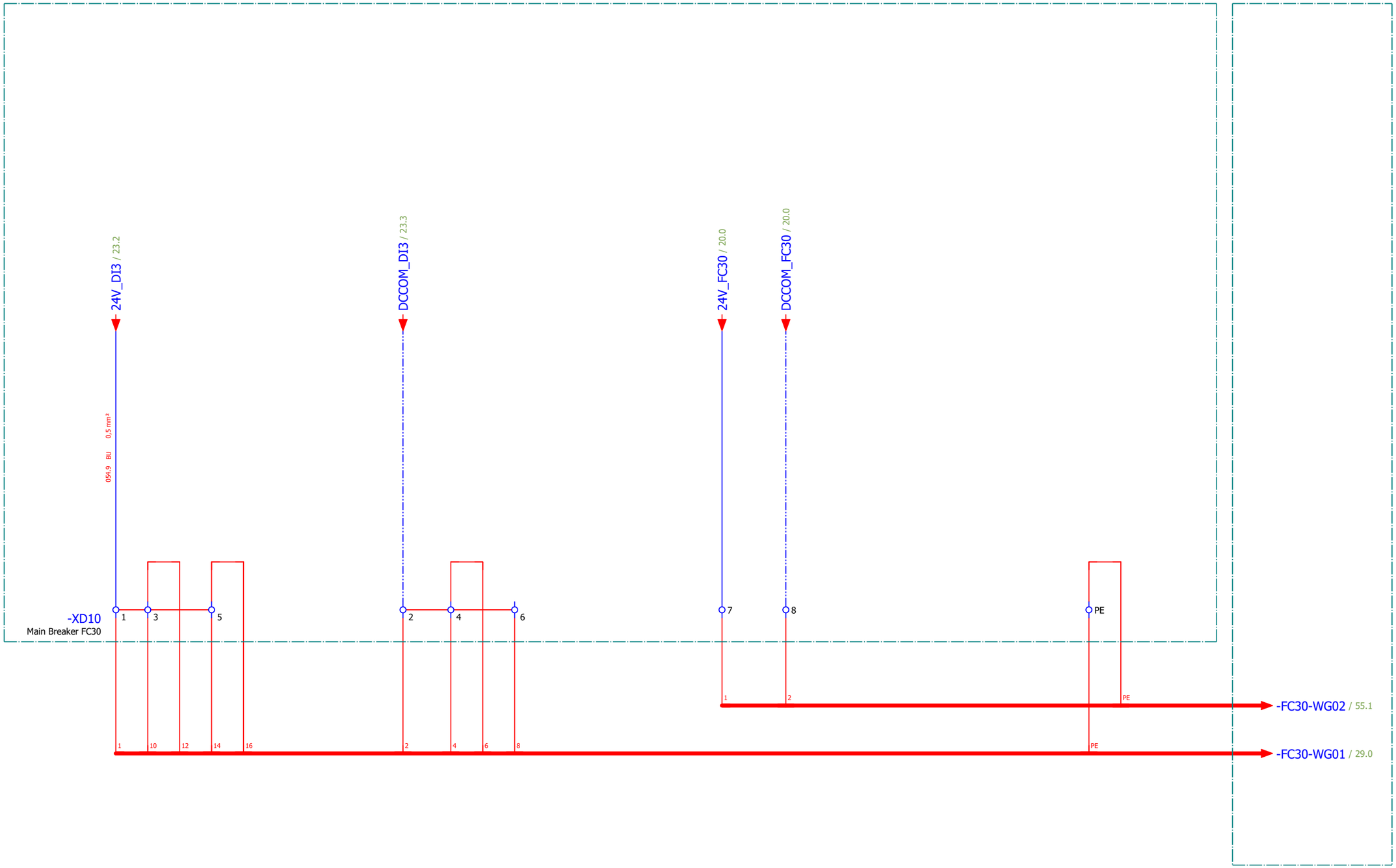
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety PLC - 24V | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 27 / 81 |




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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| EPLAN Project Pages | 627 | | |
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | FC30 Breaker 24V | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 28 / 81 |

=BA30+DA01-LA01
AC Power Output, 20ft Container Inside

=BA30+DA03
AC Power Output, 20ft Container Inside

| Breaker FC30 Opening Coil | Breaker FC30 Closing Coil | Breaker FC30 Trip Reset Coil | Breaker FC30 Undervoltage Coil | Breaker Sping Charge FB | Breaker Auxillary Contact Q1 | Breaker Auxillary Contact Q2 |
|---|---|---|---|---|---|---|
| FC30_YO | FC30_YC | FC30_RY | FC30_UR | FC30_SPR | FC30_Q1 | FC30_Q2 |
| &C02/6.1 | &C02/6.1 | &C02/6.1 | &C02/6.1 | &C02/6.1 | &C02/6.1 | &C02/6.1 |
| -KE06-Slot4 | | | | | | |
| DO1 | DO2 | DO3 | DO4 | DI1 | DI2 | DI3 |
| X01 2 | 4 | 6 | X01 8 | X03 17 | 18 | 19 |

0,5 mm² WH 074.1 → FC30_UR_1 34.6

34.6 FC30_UR_2

0,5 mm² WH 074.1

0,5 mm² WH 069.1

0,5 mm² WH 070.1

0,5 mm² WH 071.1

0,5 mm² WH 075.1

0,5 mm² WH 076.1

0,5 mm² WH 077.1

-XD10 10 11 12 13 14 15 16 17 18

28.8 / -FC30-WG01 → 3 5 7 1 2 17 9 11 → -FC30-WG01 / 53.0

-TA30-WG0X /

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| DATE |
| 29-Sep-25 |

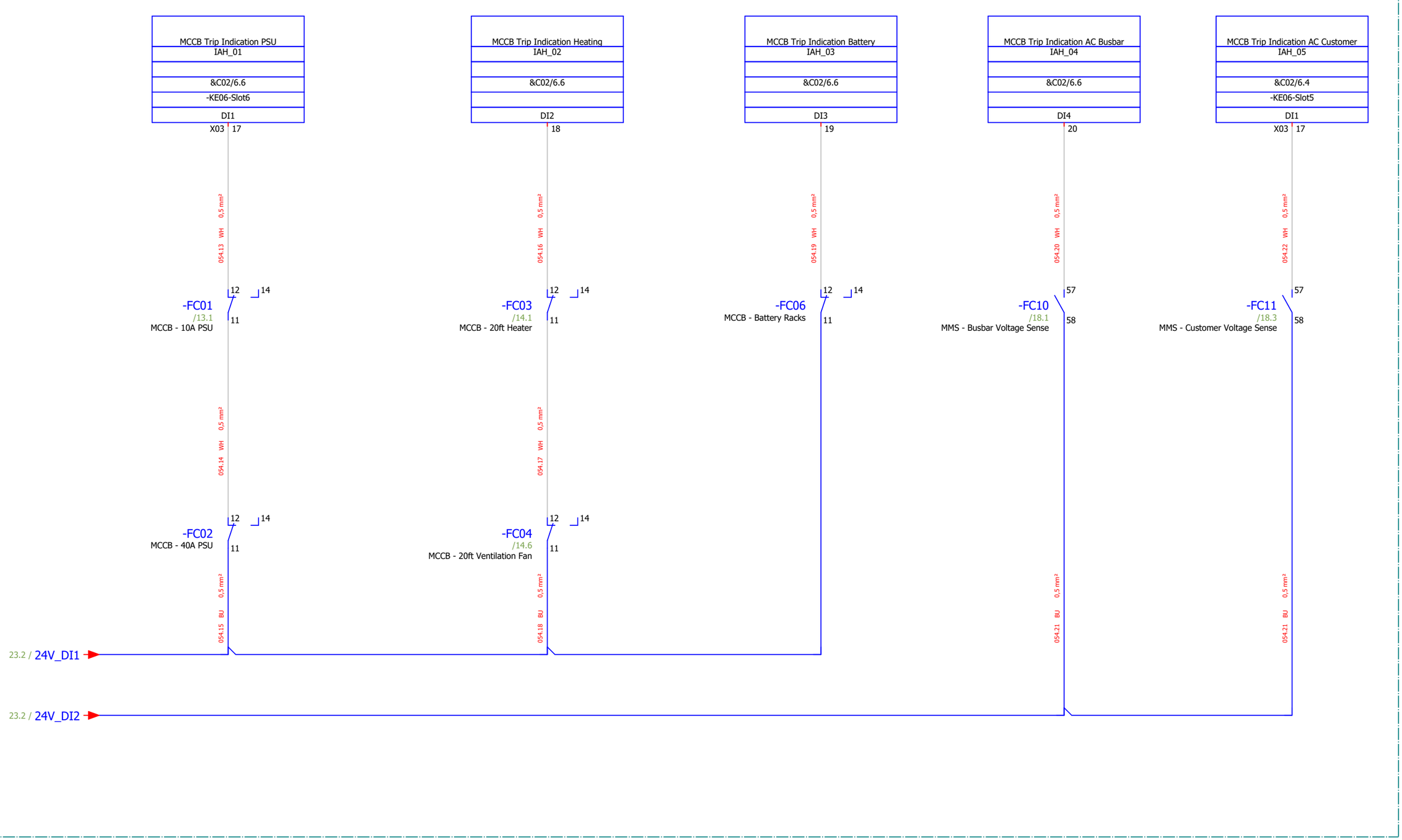
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | FC30 Breaker DI DO | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 29 / 81 |

=LA01




| | |
|---|---|
| Reference Item Number | Ballard Part # TBD |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub |
| EPLAN Revision | 12 |
| EPLAN Project Pages | 627 |
| = | ++ \| + UC31 \| & C03 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | 29-Sep-25 |

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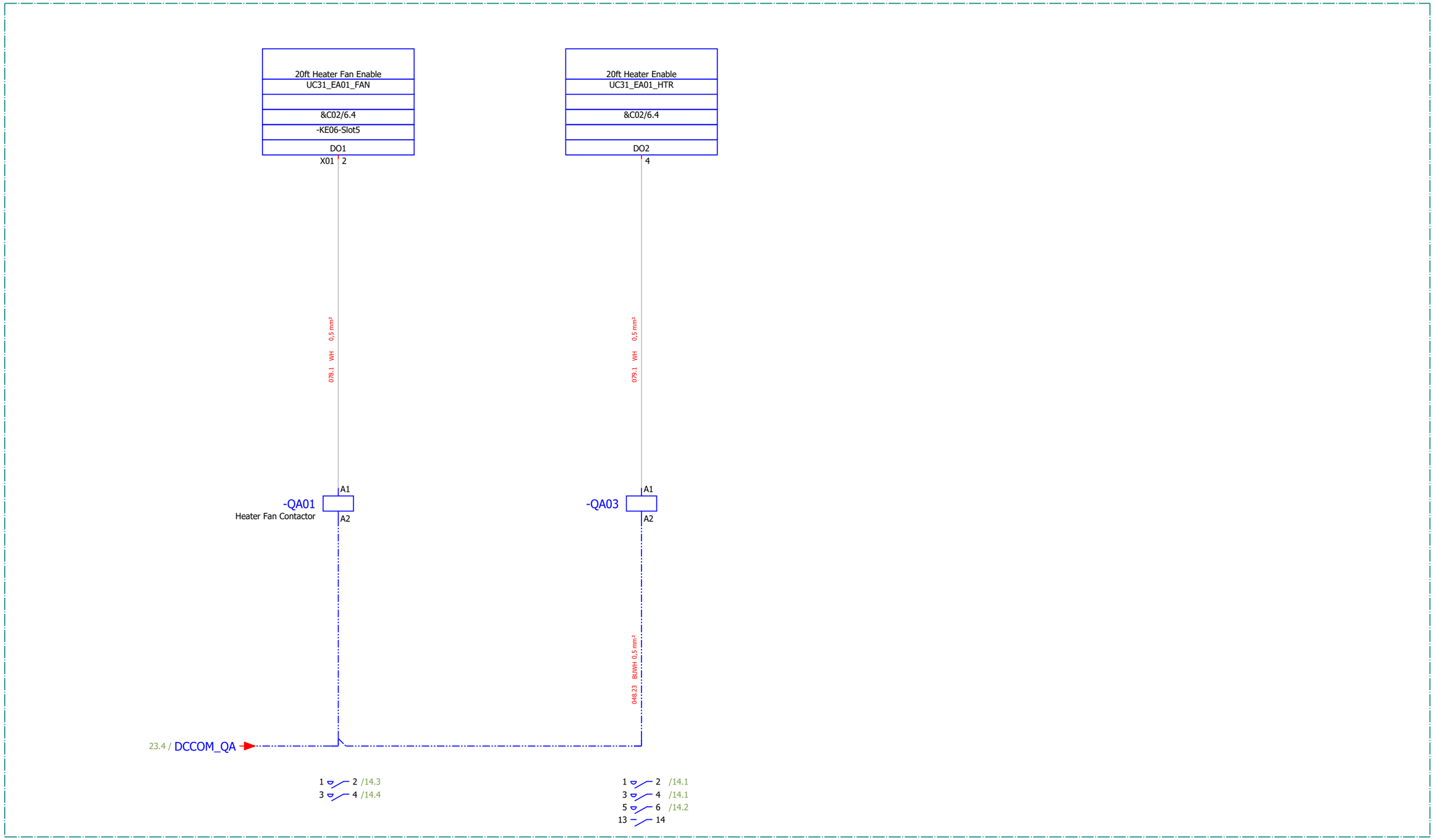
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | MCCB Trip Indicators | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 30 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01
Control System, 20ft Container




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

| REVISION INFORMATION |
|---|
| DESCRIPTION |
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| DATE |
| 29-Sep-25 |

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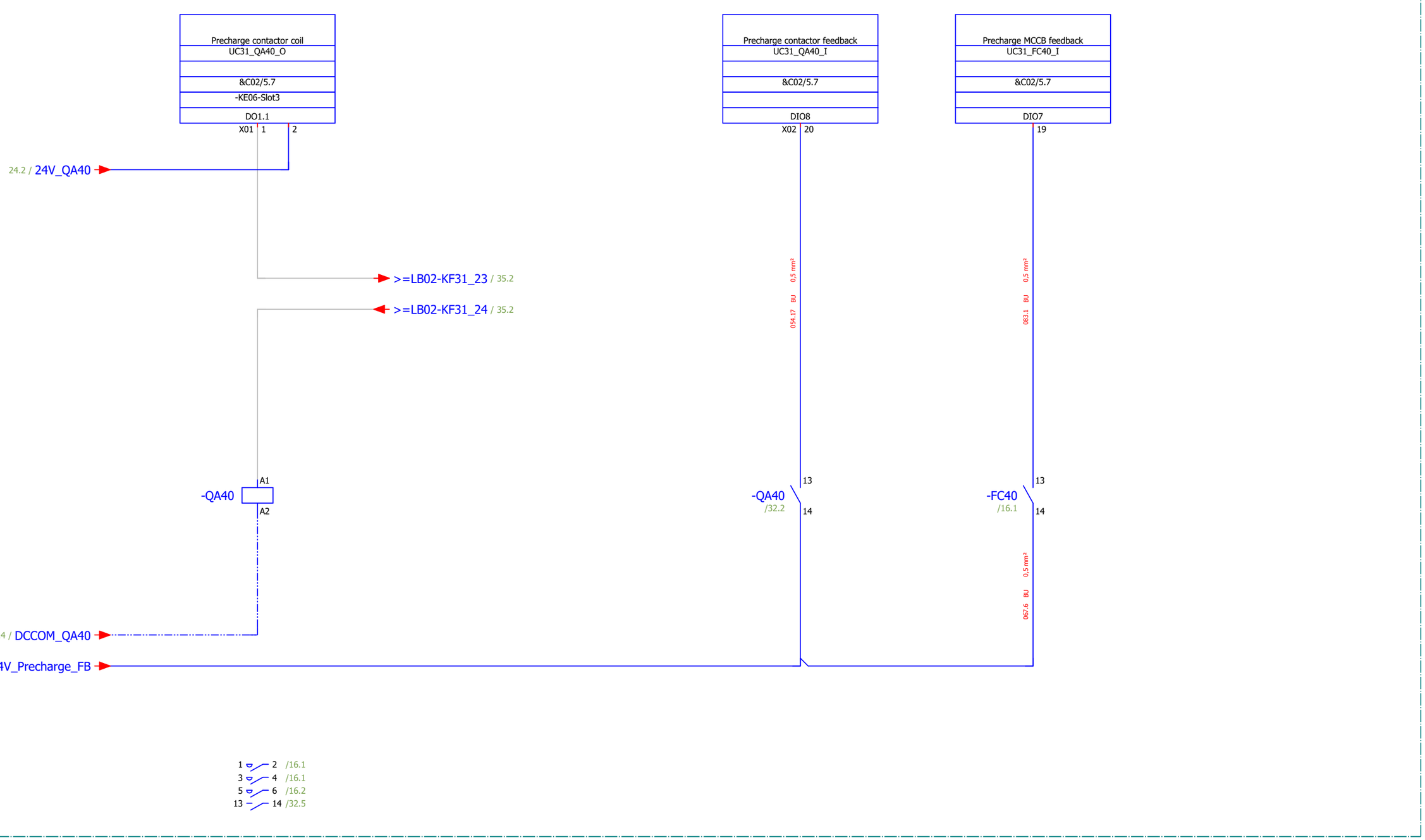
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | 20ft Heating IO | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 31 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01




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|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
| | |
| DATE | 29-Sep-25 |

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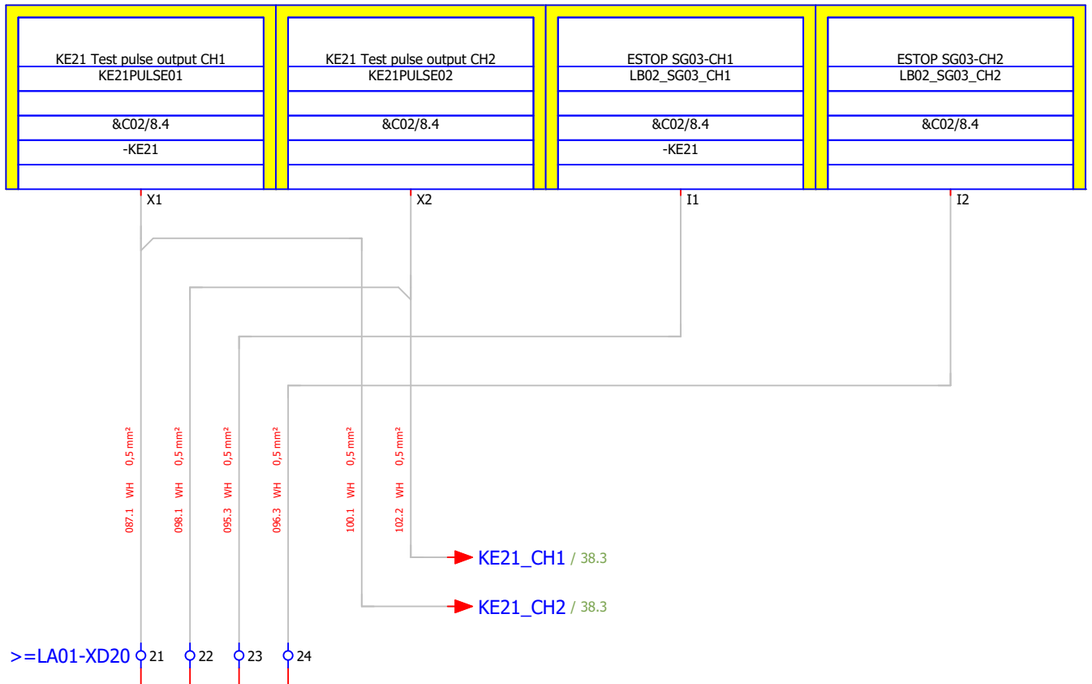
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | AC - Precharge IO | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 32 / 81 |

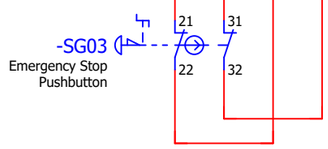
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| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31
Safety System, 20ft Control Cabinet




=LB02+DA03
Safety System, 20ft Container, Breaker Panel Front




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | 29-Sep-25 |

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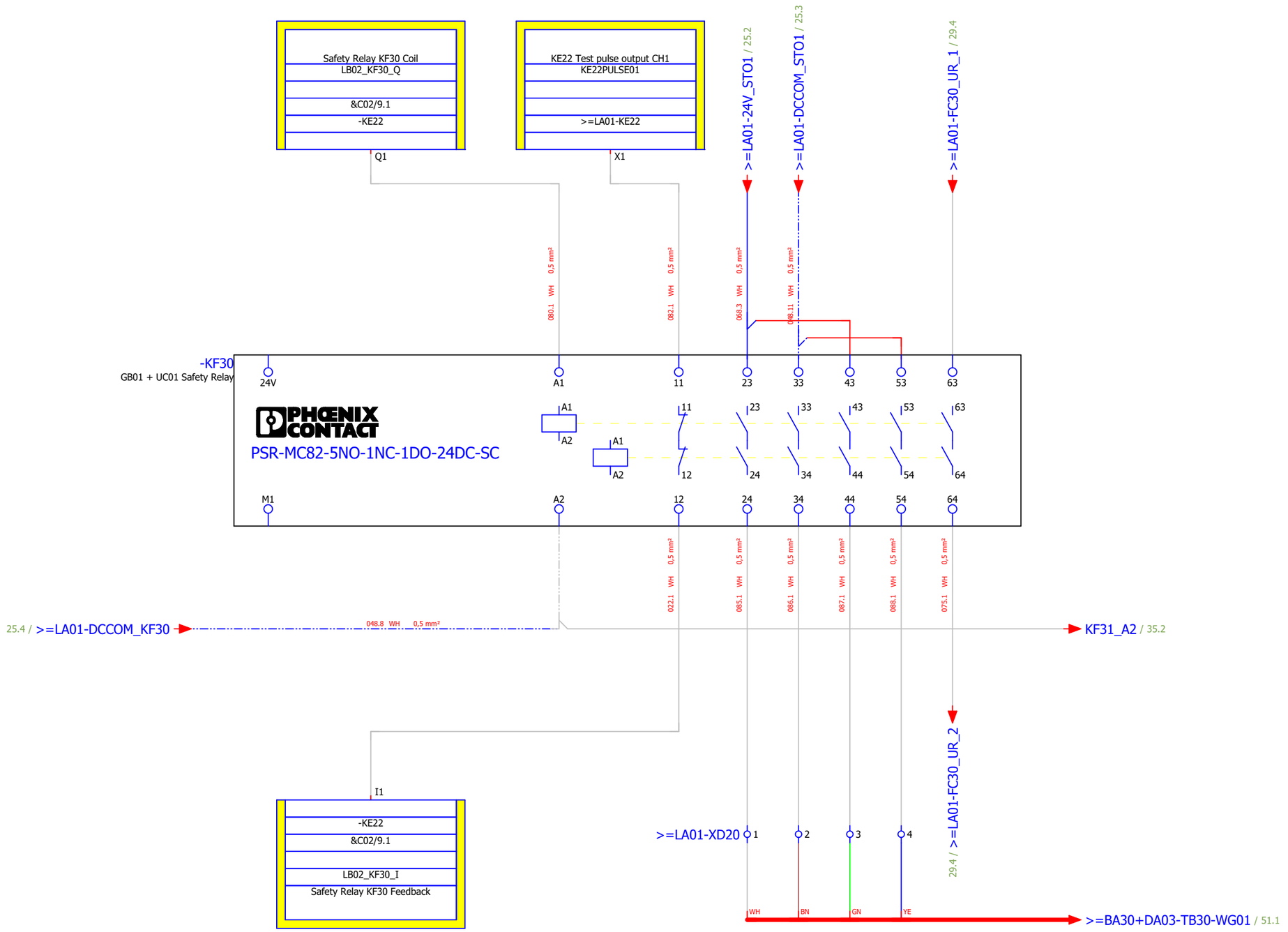
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety ESTOP | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 33 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31
Safety System, 20ft Control Cabinet




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|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

| REVISION INFORMATION |
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| DATE |
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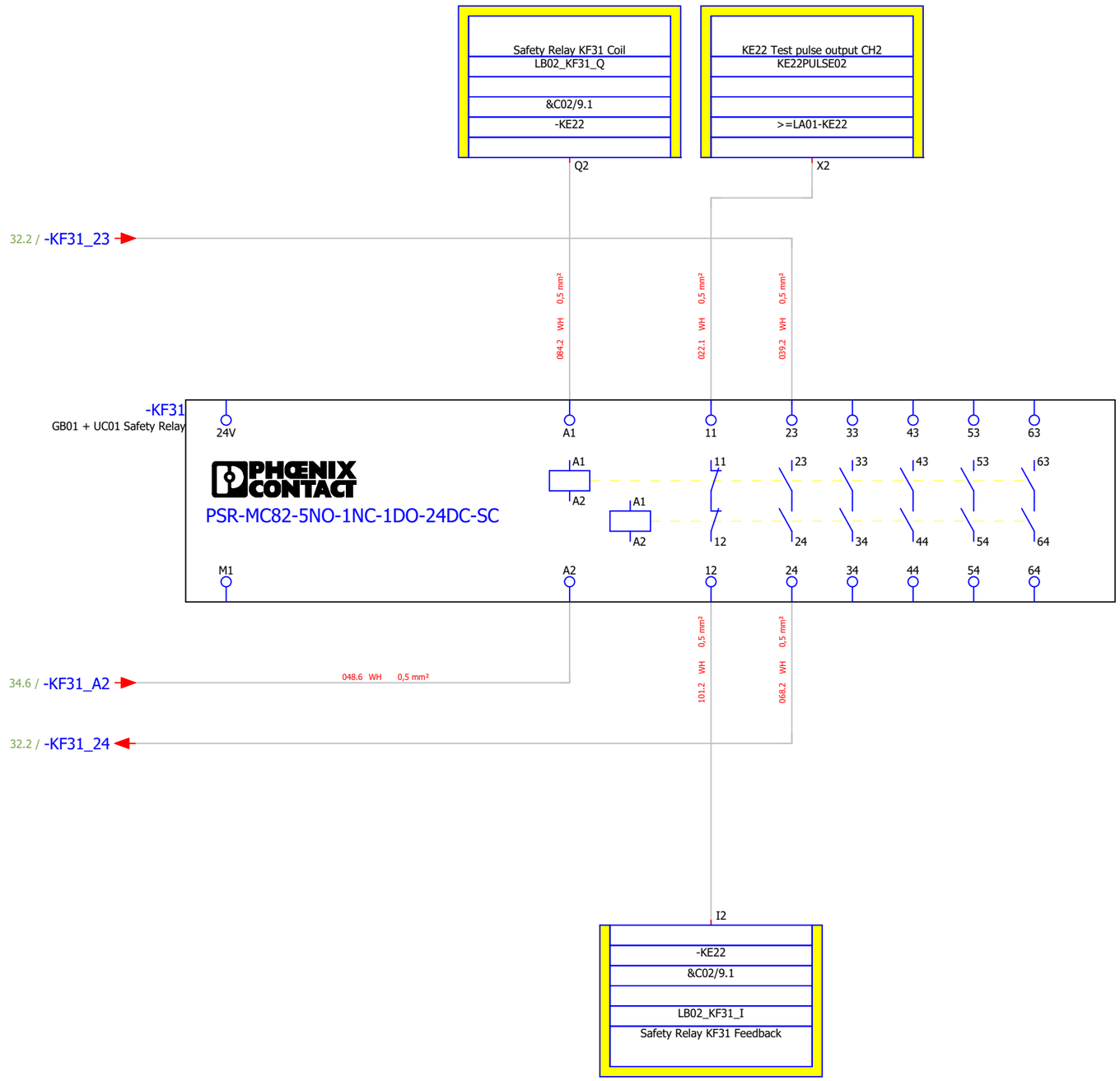
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Relay | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 34 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31
Safety System, 20ft Control Cabinet




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Relay KF31 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 35 / 81 |

=LB02+UC31
Safety System, 20ft Control Cabinet

KE22 Test pulse output CH1
KE22PULSE01
&C02/9.1
-KE22
X1

KE22 Test pulse output CH2
KE22PULSE02
&C02/9.1
X2

Safety Door Sensor, Door A - CH1
LB02_BG01_CH1
&C02/9.1
-KE22
I5

Safety Door Sensor, Door A - CH2
LB02_BG01_CH2
&C02/9.1
I6

Safety Door Sensor, Door B - CH1
LB02_BG02_CH1
&C02/9.1
I7

Safety Door Sensor, Door B - CH2
LB02_BG02_CH2
&C02/9.1
I8

200.1 WH 0,5 mm²
087.1 WH 0,5 mm²
201.1 WH 0,5 mm²
088.1 WH 0,5 mm²
089.1 WH 0,5 mm²
090.1 WH 0,5 mm²

>=LA01-XD20 5 6 7 8 9 10 11 12

=LB02+DA03
Safety System, 20ft Container, Inside

-BG01.WG01
20 m
4x0.25
300
Door A
BN WH BU BK

-BG01.XG01
M8 Female, A code
1 2 3 4

-BG01
IFM.MN502S
Door Switch - Door A
Out1 In1 Out2 In2
1 2 3 4

-BG02.WG01
20 m
4x0.25
300
Door B
BN WH BU BK

-BG02.XD01
M8 Female, A code
1 2 3 4

-BG02
IFM.MN502S
Door Switch - Door A
Out1 In1 Out2 In2
1 2 3 4

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

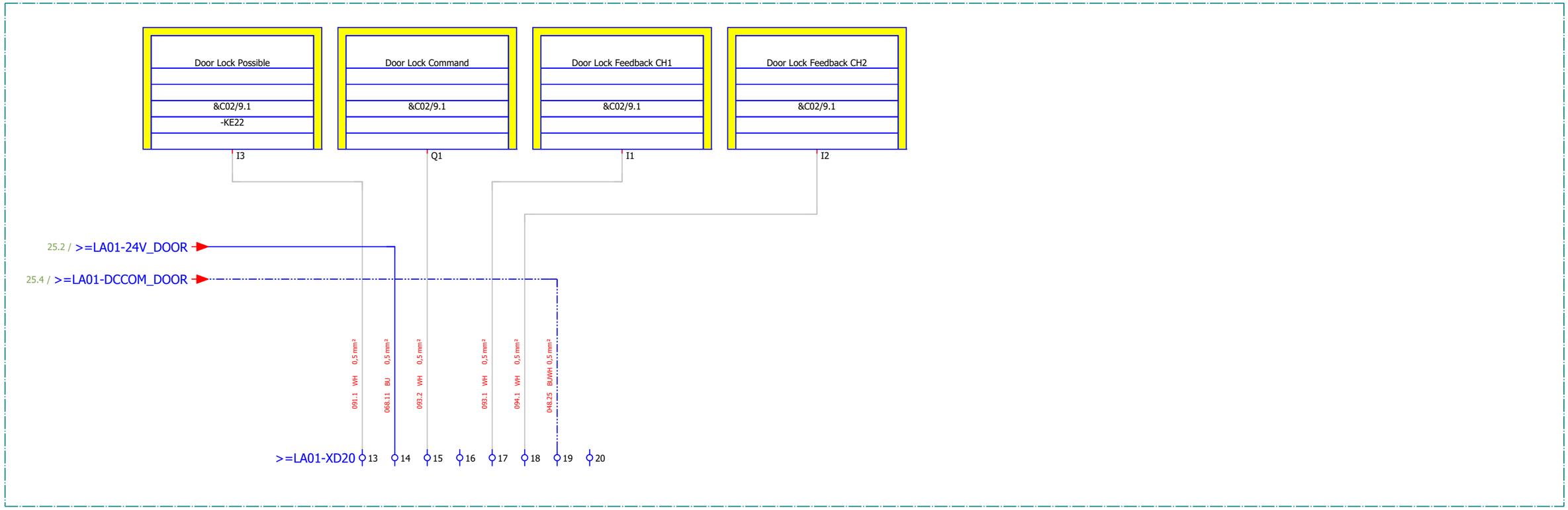
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| DESCRIPTION |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Door Switches | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 36 / 81 |

=LB02+UC31
Safety System, 20ft Control Cabinet




=LB02+DA03
Safety System, 20ft Container, Inside

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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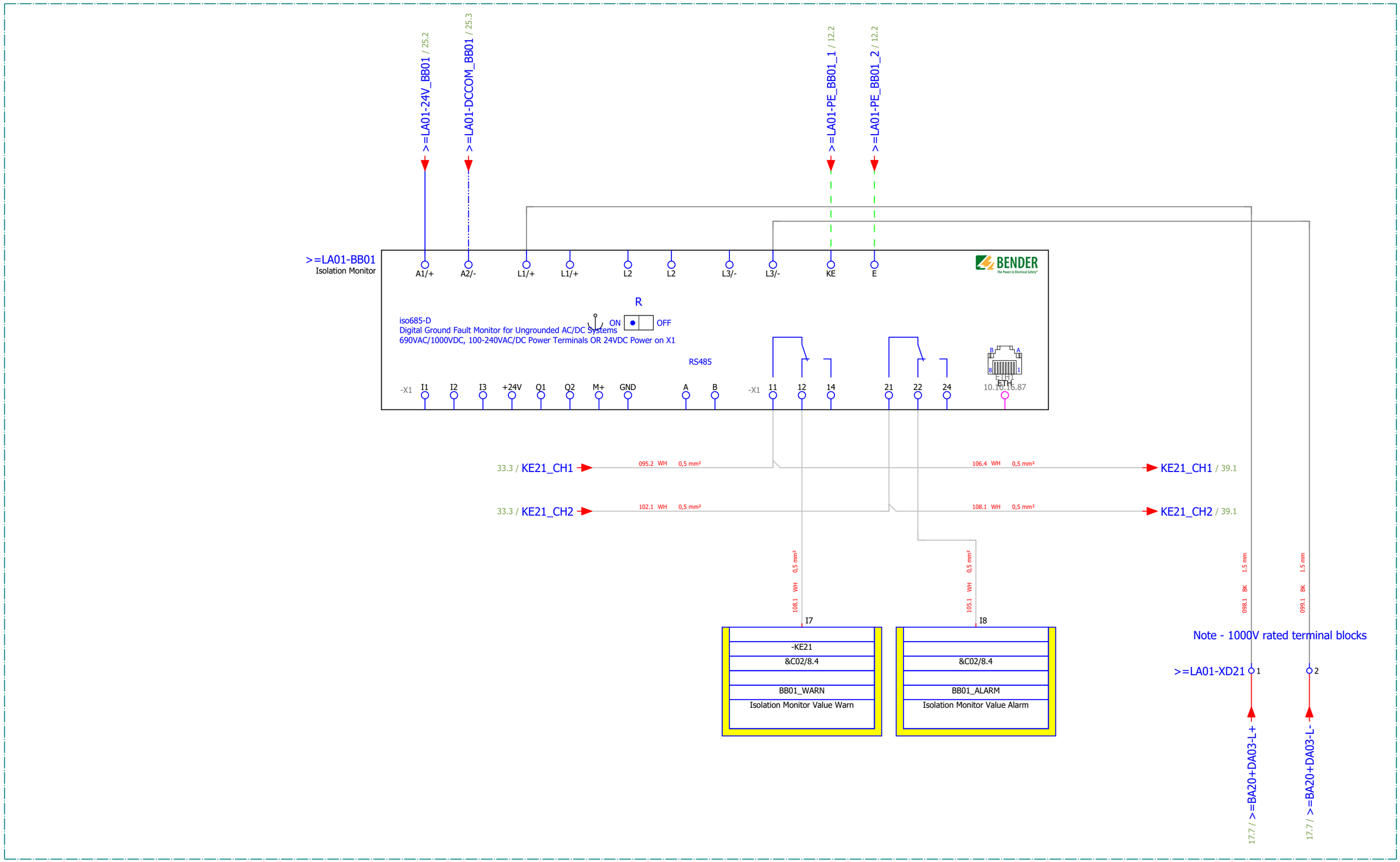
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Door Lock | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 37 / 81 |

=LB02+UC31
Safety System, 20ft Control Cabinet




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
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| DATE | 29-Sep-25 |

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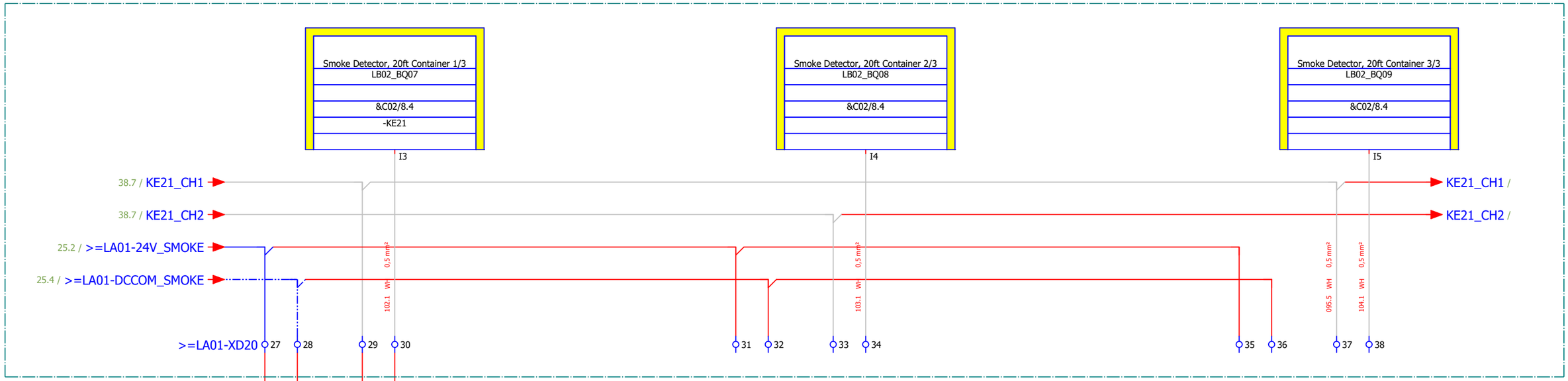
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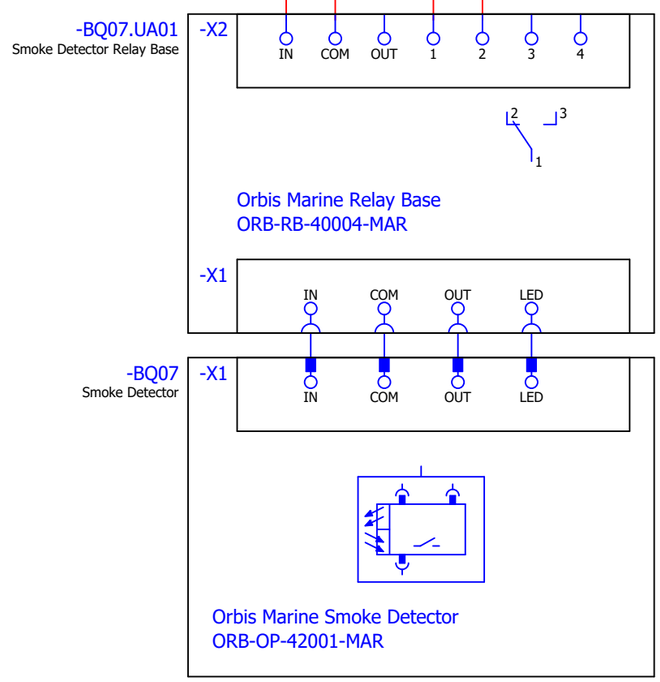
| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Isolation Monitor | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 38 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LB02+UC31
Safety System, 20ft Control Cabinet




=LB02+DA03
Safety System, 20ft Container, Inside




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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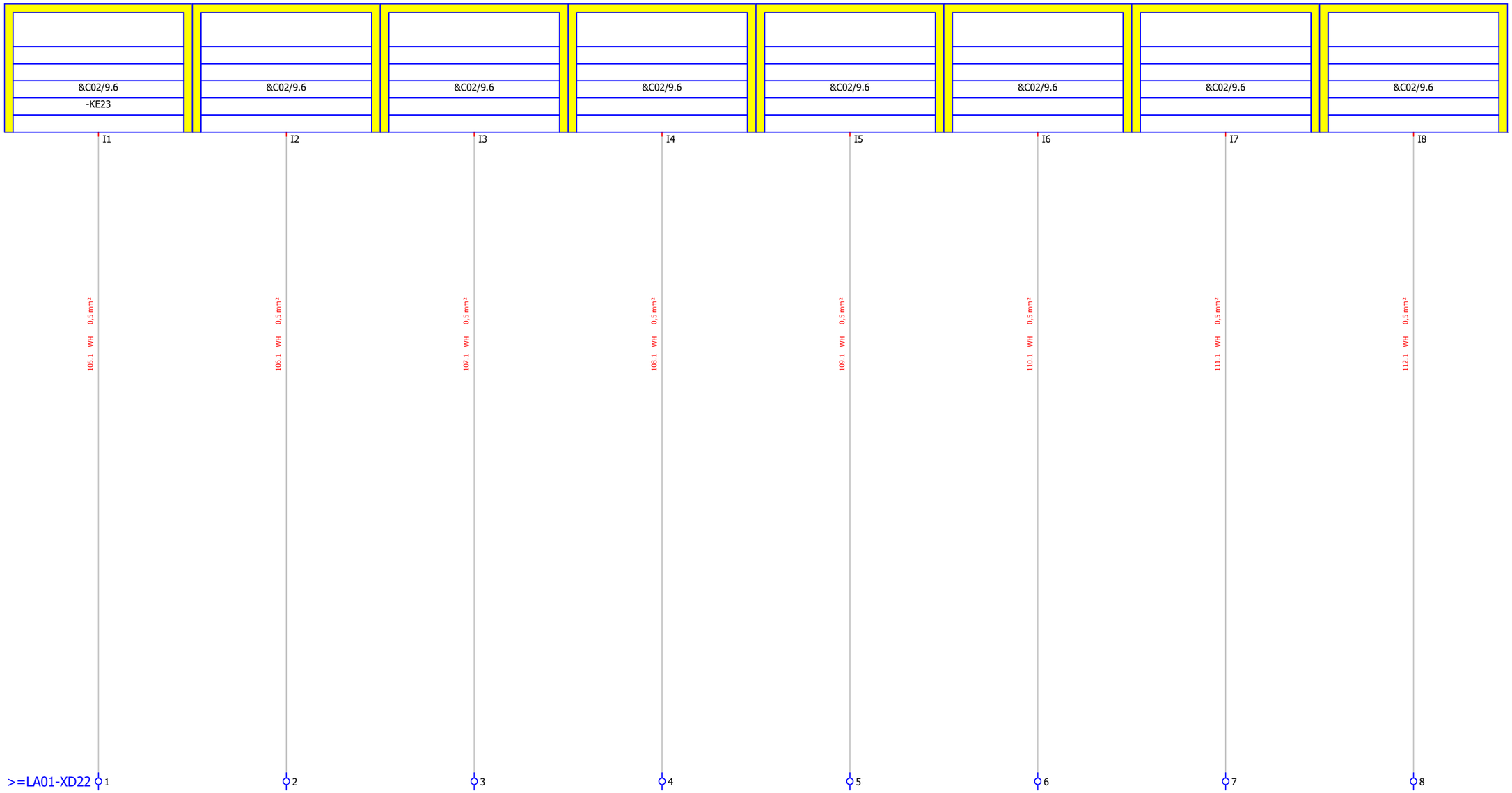
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Smoke Detector | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 39 / 81 |

=LB02+UC31

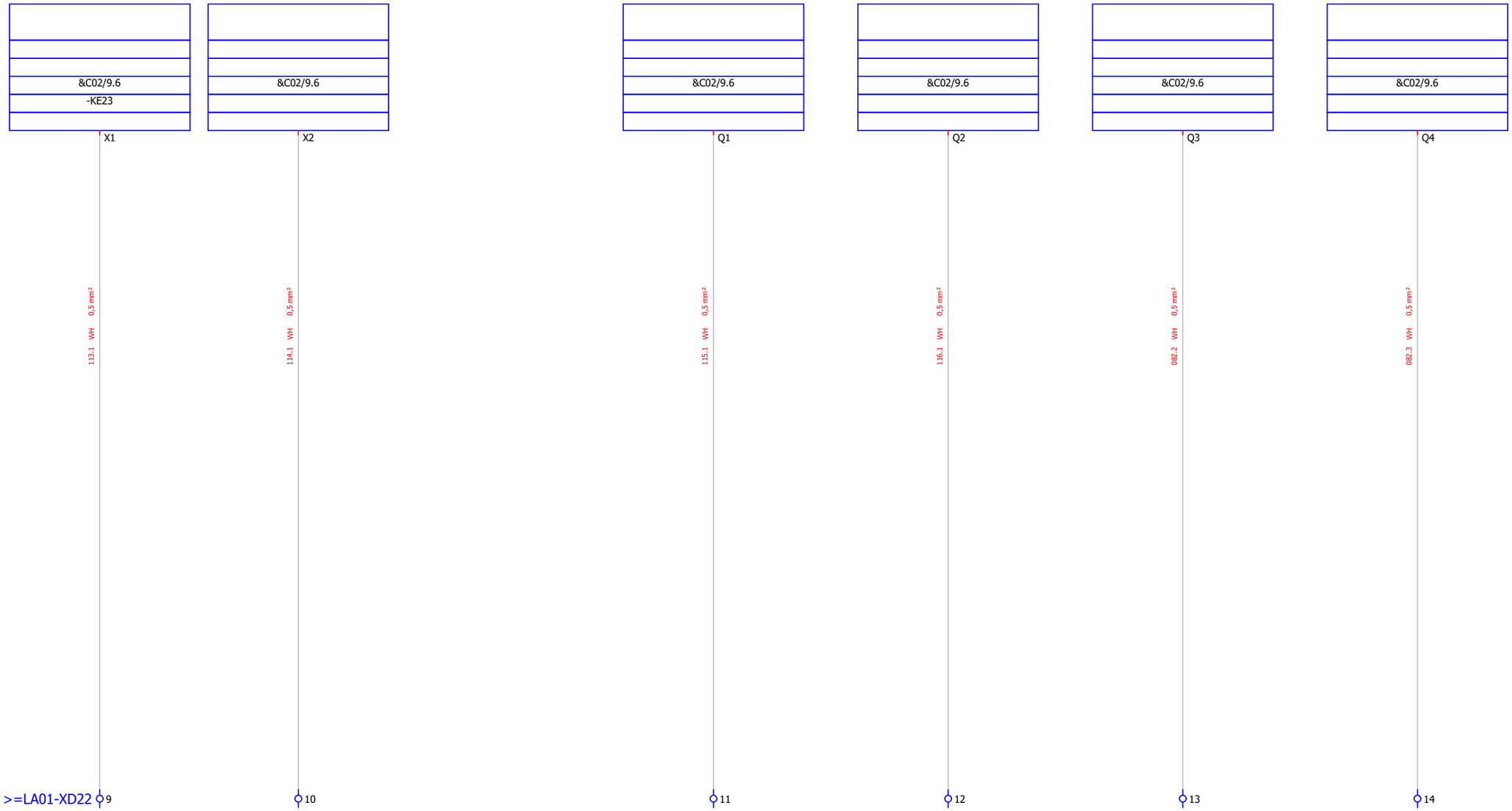
Safety System, 20ft Control Cabinet




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| Reference Item Number | Ballard Part # TBD | | | REVISION INFORMATION | THIS DOCUMENT, SUBMITTED IN CONFIDENCE, CONTAINS PROPRIETARY INFORMATION WHICH SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR MANUFACTURING OR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF BALLARD POWER SYSTEMS INC. OR A RELATED WHOLLY-OWNED SUBSIDIARY OR AFFILIATE. | BALLARD™ CONFIDENTIAL | DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | | DESCRIPTION | | | DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| EPLAN Revision | 12 | | | | | THIS DOCUMENT'S APPROVAL IS MANAGED BY E-SIGNATURE ON FILE IN BALLARD POWER SYSTEMS' PLM SYSTEM | SHEET TYPE/DESC | Safety Battery Pack Inputs | | |
| EPLAN Project Pages | 627 | | | DATE | | | ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 40 / 81 |
| = | ++ | + UC31 | & C03 | 29-Sep-25 | | | | | | |

=LB02+UC31

Safety System, 20ft Control Cabinet




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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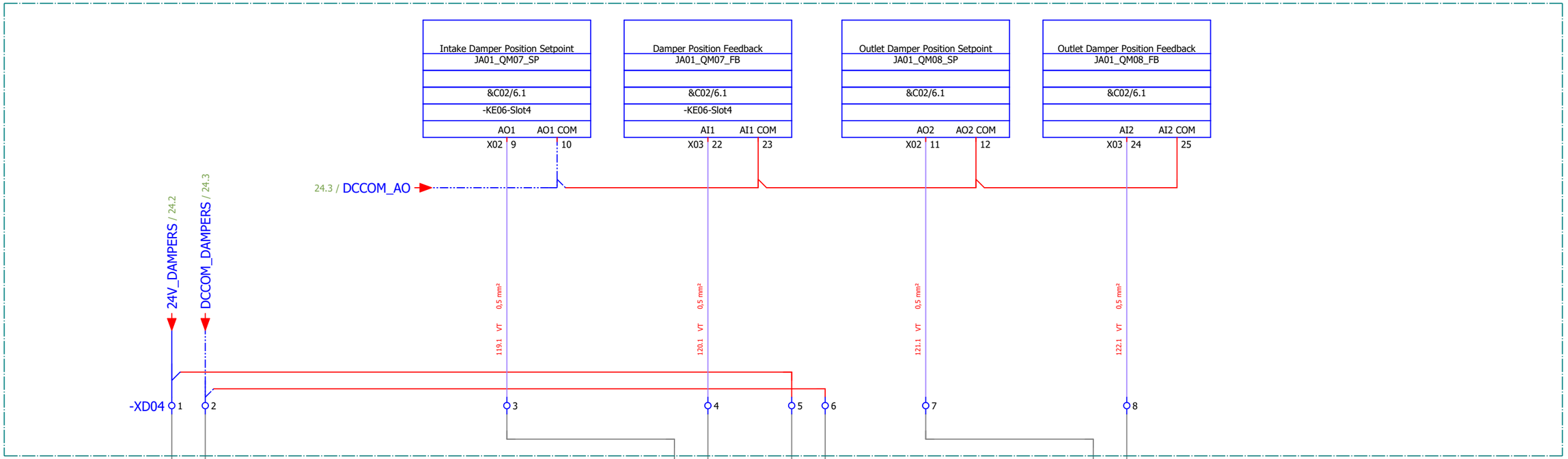
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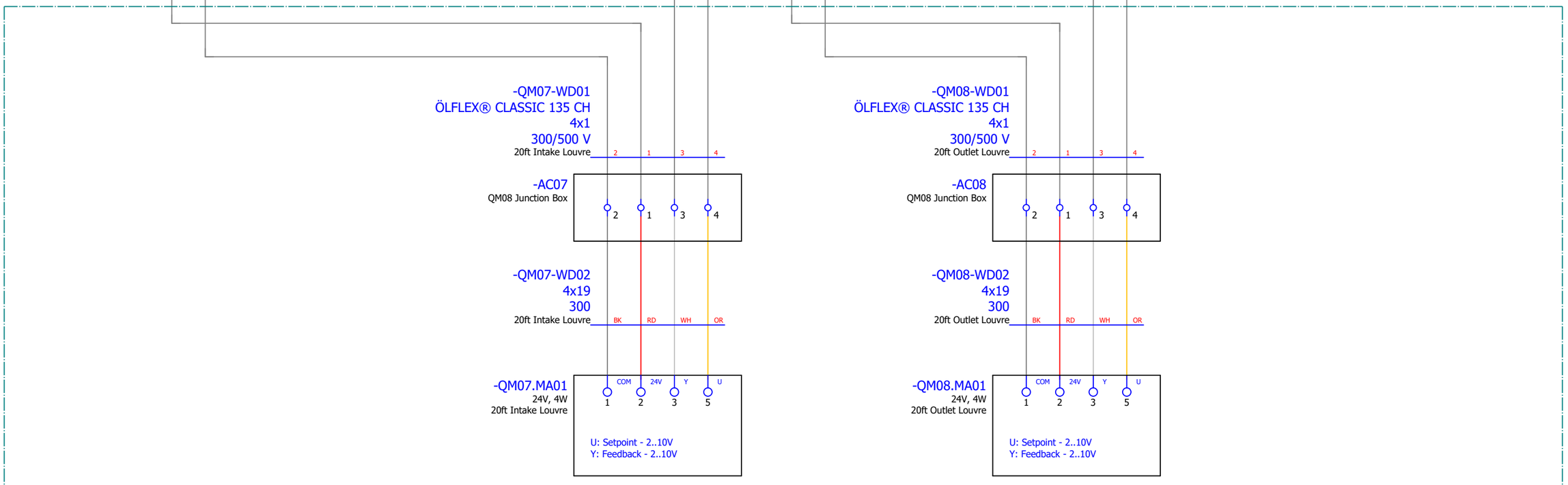
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Safety Battery Pack Outputs | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 41 / 81 |

=LA01
Control System, 20ft Container




=JA01+DA03




| | |
|---|---|
| Reference Item Number | Ballard Part # TBD |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub |
| EPLAN Revision | 12 |
| EPLAN Project Pages | 627 |
| = ++ + UC31 & C03 | |

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| 29-Sep-25 |

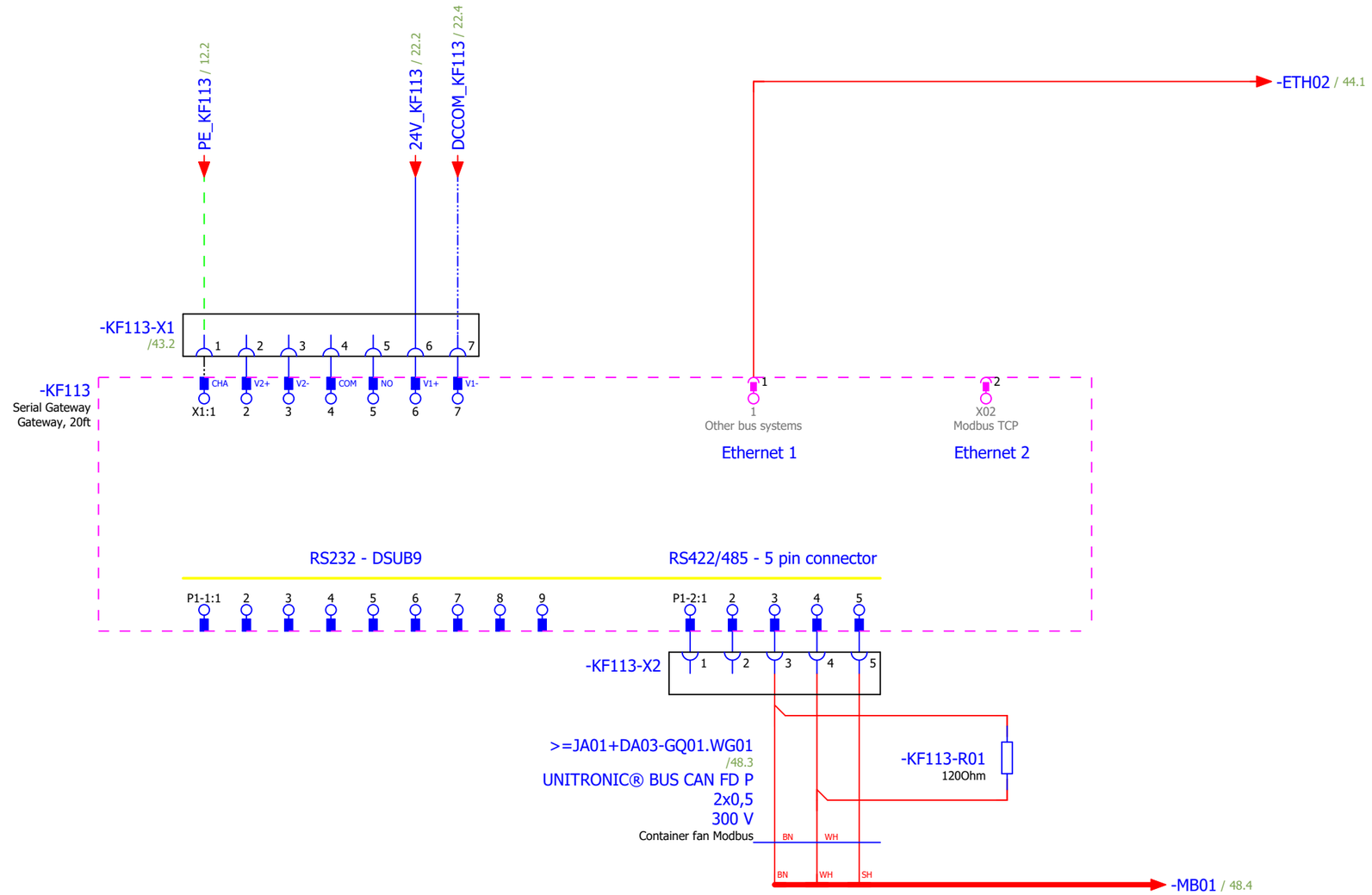
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Ventilation Damper IO | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 42 / 81 |

=LA01
Control System, 20ft Container




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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|---|---|
| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | 29-Sep-25 |

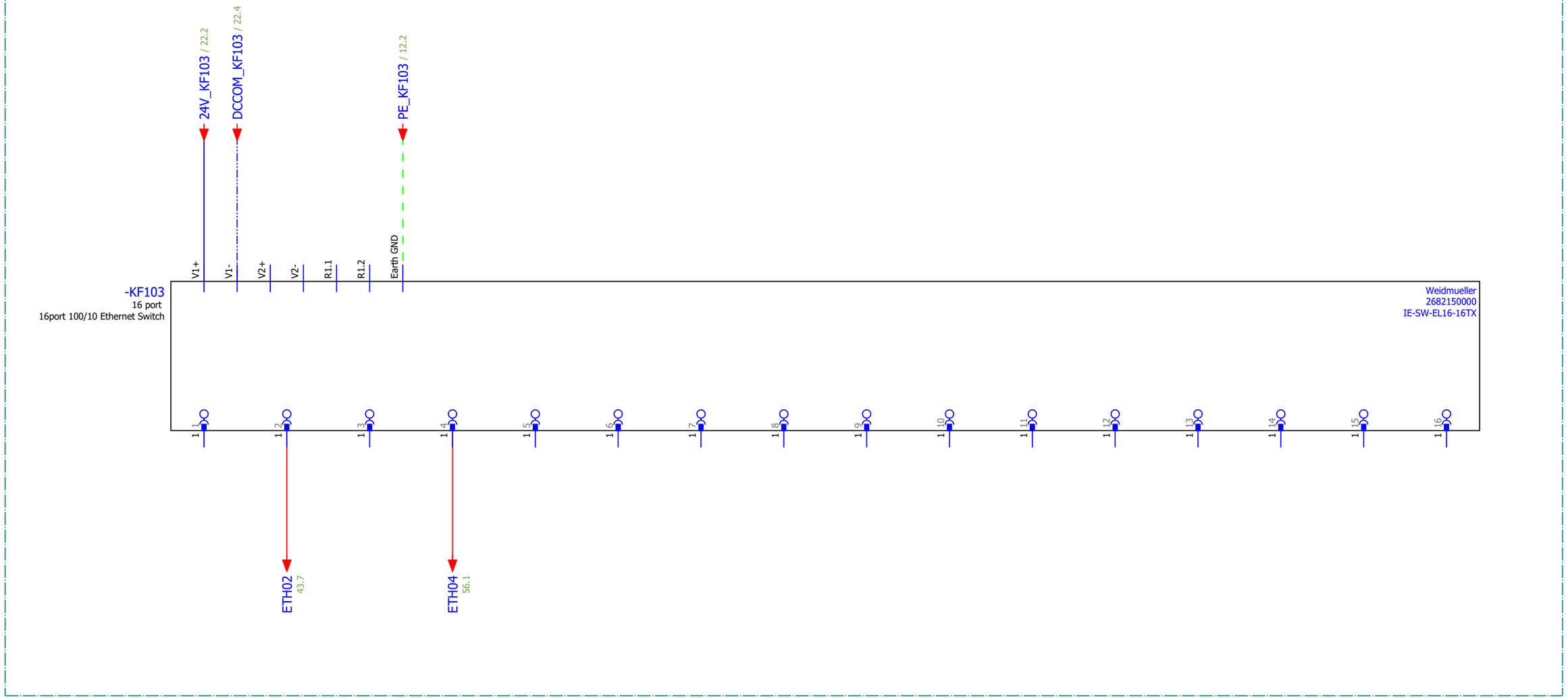
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Modbus Converter | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 43 / 81 |

=LA01
Control System, 20ft Container

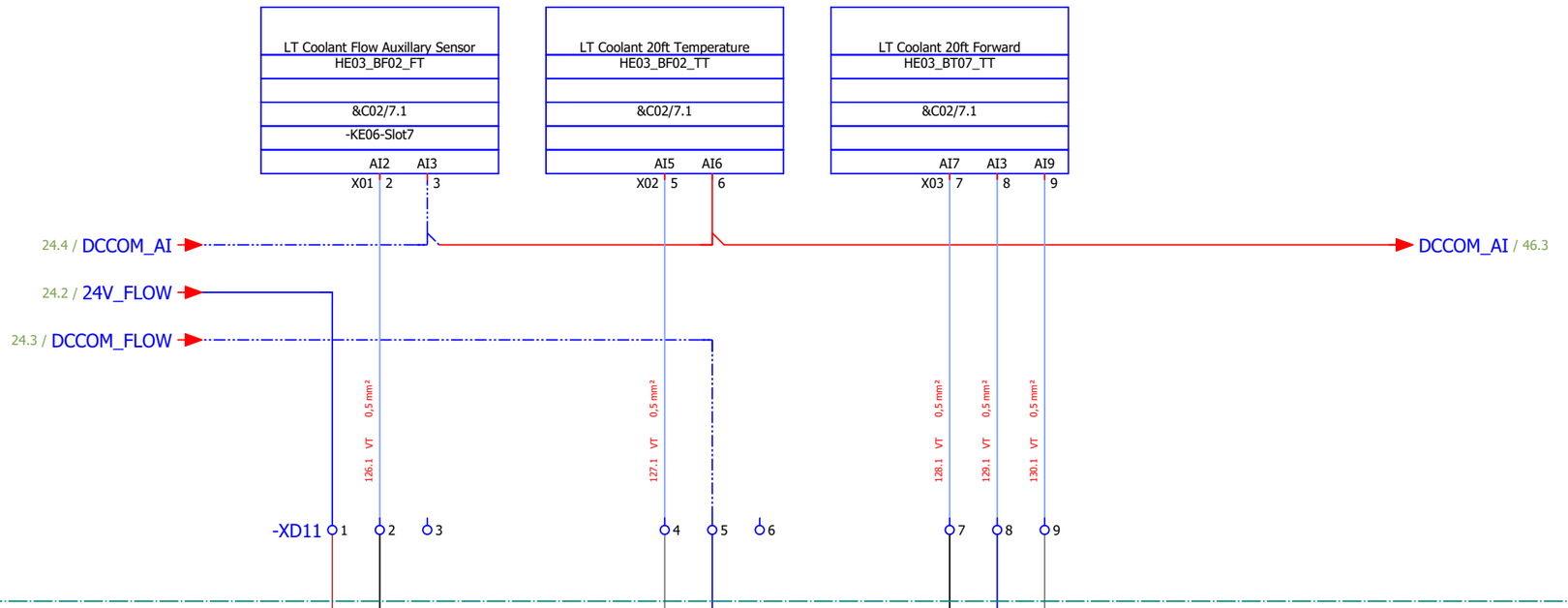



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|---|---|---|---|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | | REVISION INFORMATION | THIS DOCUMENT, SUBMITTED IN CONFIDENCE, CONTAINS PROPRIETARY INFORMATION WHICH SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR MANUFACTURING OR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF BALLARD POWER SYSTEMS INC. OR A RELATED WHOLLY-OWNED SUBSIDIARY OR AFFILIATE. | BALLARD™ CONFIDENTIAL | DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | | DESCRIPTION | | | DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| EPLAN Revision | 12 | | | | | THIS DOCUMENT'S APPROVAL IS MANAGED BY E-SIGNATURE ON FILE IN BALLARD POWER SYSTEMS' PLM SYSTEM | SHEET TYPE/DESC | Network Switch | | |
| EPLAN Project Pages | 627 | | | DATE | | | ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 44 / 81 |
| = | ++ | + UC31 | & C03 | 29-Sep-25 | | | | | | |

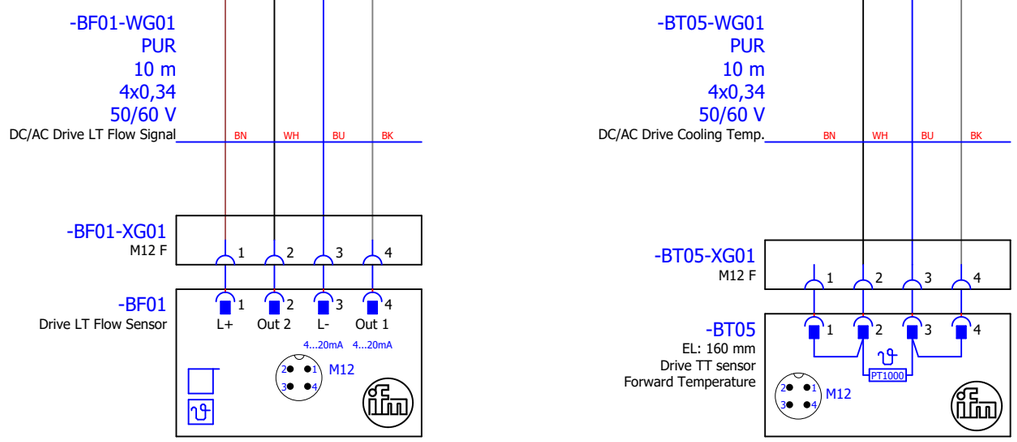
FRM5103656/0B

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01
Control System, 20ft Container




=HE03+DA03
Tempereature and flow sensors. Drive cooling




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| DATE |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | LT Measurements | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 45 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01
Control System, 20ft Container

Container temperature
DA03_BT01
&C02/7.1
-KE06-Slot7
AI10 AI11 AI12
X04 10 11 12

0,5 mm² VT 131.1
0,5 mm² VT 132.1
0,5 mm² VT 133.1

-XD11 10 11 12

Container Diff. Pressure
DA03_BP01
&C02/7.1
-KE06-Slot7
AI23
X08 23 24

45.6 / DCCOM_AI
23.4 / DCCOM_DP
23.2 / 24V_DP

-XD11 22 23 24

Klemmer skal monteres

=JA01+DA03
Control System, 20ft Container

-BT01-WG01
PUR
10 m
4x0,34
50/60 V
Container Temperature BN WH BU BK

-BT01-XG01
M12 F
1 2 3 4

-BT01
-25...80 °C
Container Temperature B
Transducer
1 2 3 4
PT1000
M12

-BP01.WG01
ÖLFLEX® CLASSIC 110 CH
4x1
300/500 V
Differential-pressure intake filter 1 2 3

-BP01
Container Indoor/Outdoor
Diffential Pressure Sensor
UB+ GND AOU1 AOI1
AC/DC 24 V
DC 0...5/10V
DC 4...20mA
ON 1 2 3 4 5 6
Setting: 0 to 500 Pa

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

| REVISION INFORMATION |
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| DESCRIPTION |
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| DATE |
| 29-Sep-25 |

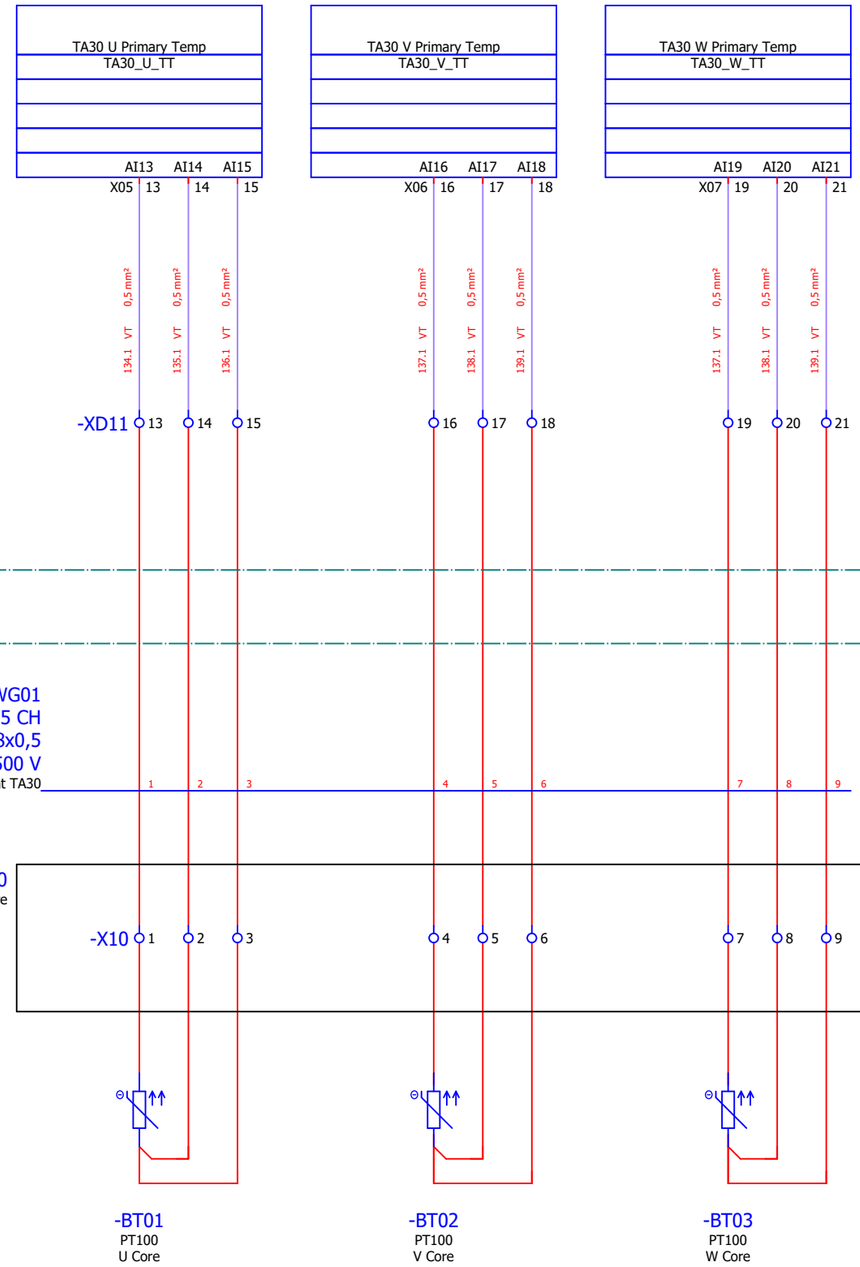
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Cont. Temp and Diff. Pressure | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 46 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=LA01
Control System, 20ft Container




=BA20+DA03
Control System, 20ft Container




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Transformer Temperature Measurements | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 47 / 81 |

=JA01+DA03
Container ventilation fan

/ >+UC31-XD01:2
/ >+UC31-XD01:4
/ >+UC31-XD01:6
/ >+UC31-XD01:PE2

-GQ01.WD01
ÖLFLEX® CLASSIC 135 CH BK 0,6/1 kV
4x2,5
0,6/1,0 kV
Container fan supply
GN/YE 1 2 3

-GQ01.WG01
/43.4
UNITRONIC® BUS CAN FD P
2x0,5
300 V
Container fan Modbus
BN WH

>=LA01+UC31-MB01 / 43.6

-GQ01-R01
120Ohm

-GQ01
1kW
Container ventilation fan
PE PE L1 L2 L3 NC COM 0-10V RSB RSA GND 10V
1 2 3 4 5 6 7 8 10 11 12 13
M
3~
PE

>=LA01+UC31-XD01:1 /
>=LA01+UC31-XD01:3 /
>=LA01+UC31-XD01:5 /
>=LA01+UC31-XD01:N /
>=LA01+UC31-XD01:PE /

-EB02-WD01
ÖLFLEX® CLASSIC 110 CH
5x2,5
300/500 V
Container heater supply
1 2 3 4 GNYE

>=LA01+UC31-XD01:7 /
>=LA01+UC31-XD01:8 /

-EB02-WG01
ÖLFLEX® CLASSIC 110 CH
3x1
300/500 V
Container heater thermostat
1 2

-EB02
Container heating unit
L1 L2 L3 N PE T1 T2
1 2 3 4 5 6 7

11 kW Heater fan

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | |
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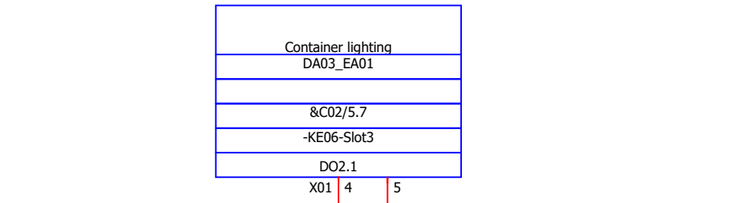
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Container ventilation and heating | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 48 / 81 |

=LA01+UC31
Container AUX control




/ 24VDC

/ 0VDC

-XD23 2 1 3 4

Klemmer skal monteres

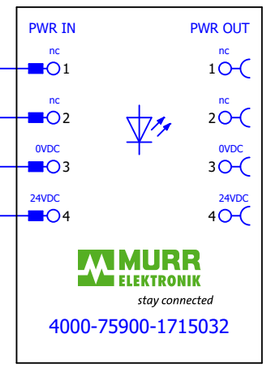
=JA01+DA03
Container Lighting

-EA01-WD01
PUR
20 m
4x0,25
50/60 V
LED Light strip EA01

BU BK WH BN

-EA01
24V, 32W
LED Light Strip

-EA01-XD01




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| REVISION INFORMATION | |
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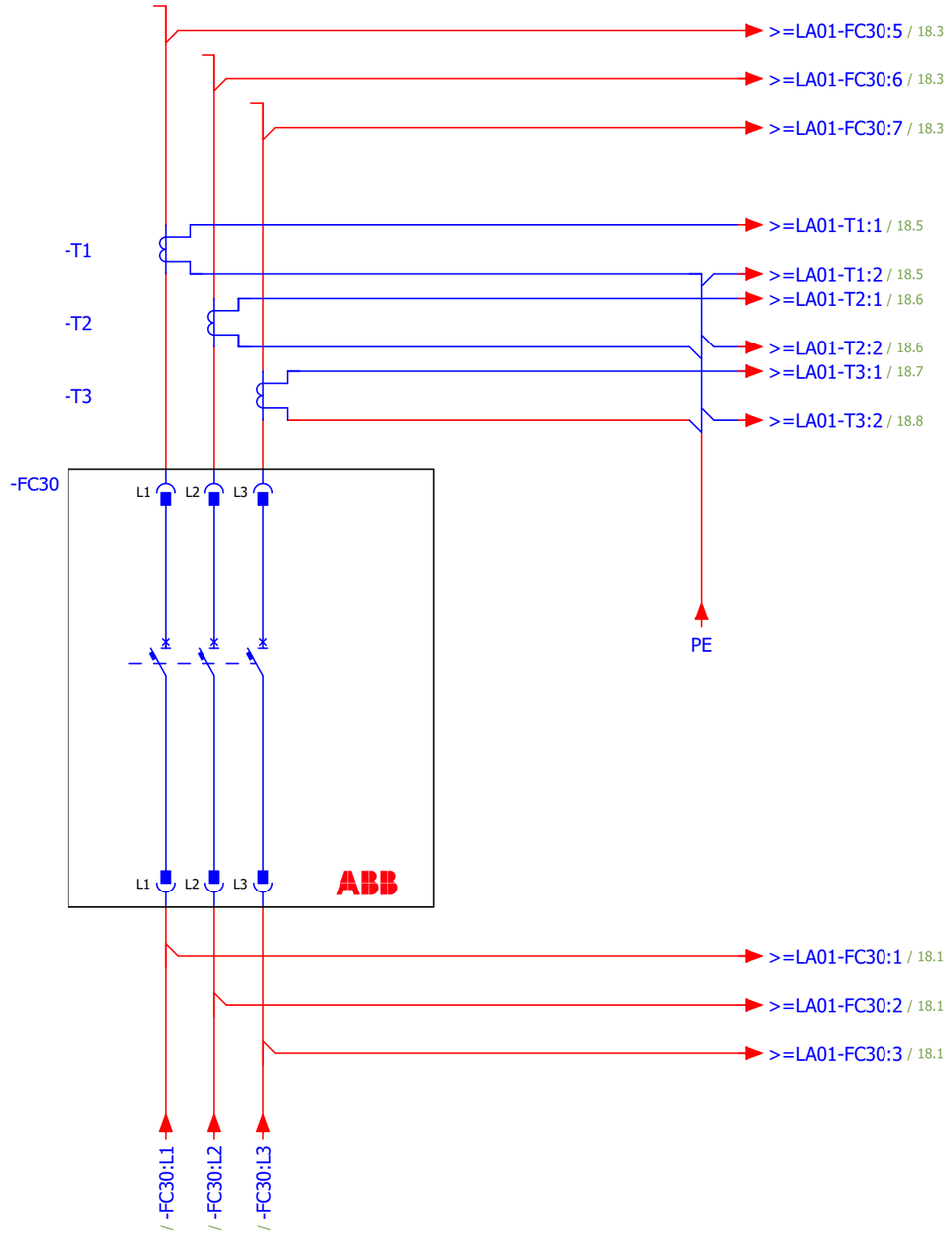
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Container Lighting | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 49 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30
Output Breaker




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| DESCRIPTION |
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| DATE |
| 29-Sep-25 |

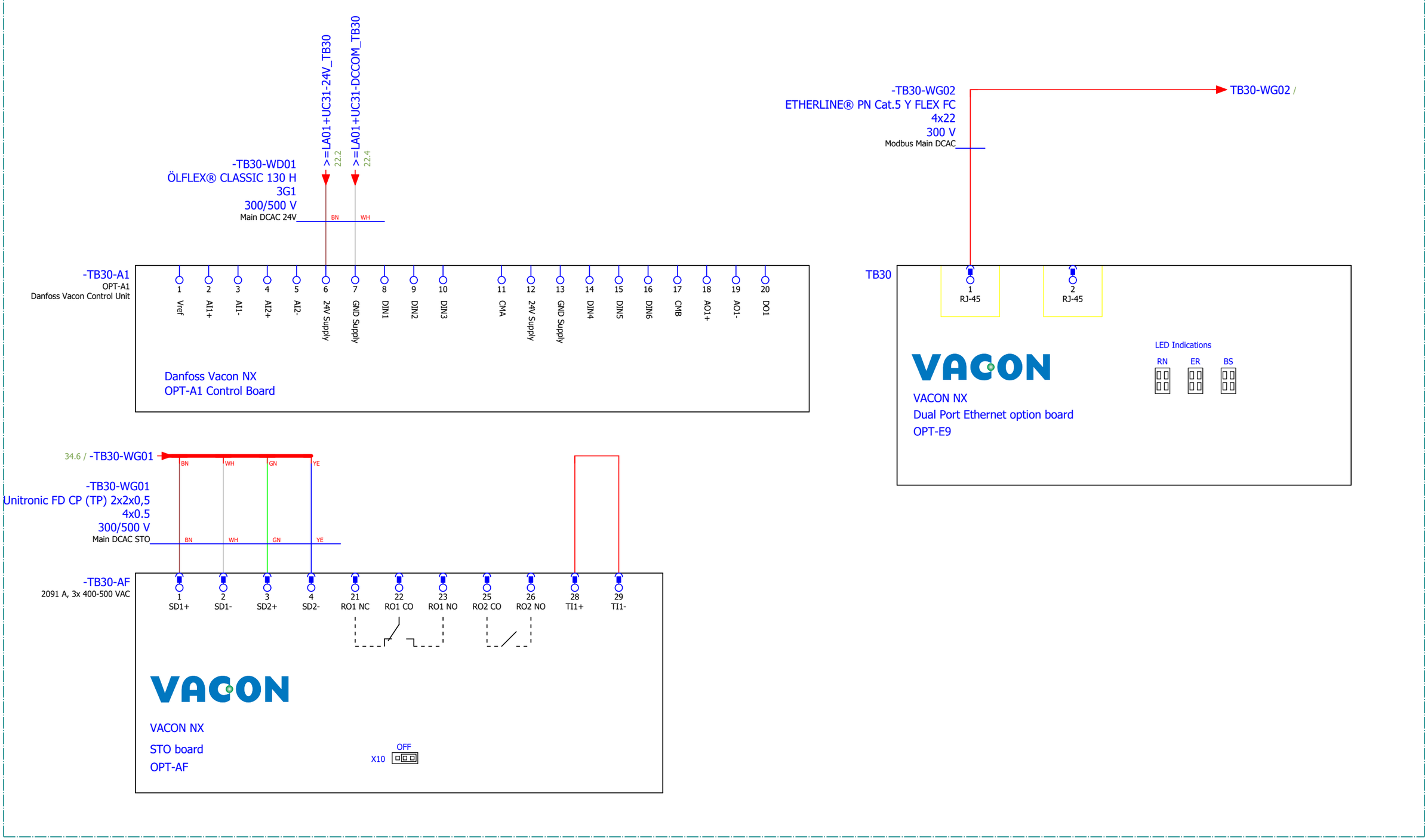
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Main output breaker | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 50 / 81 |

=BA30+DA03
20ft Container




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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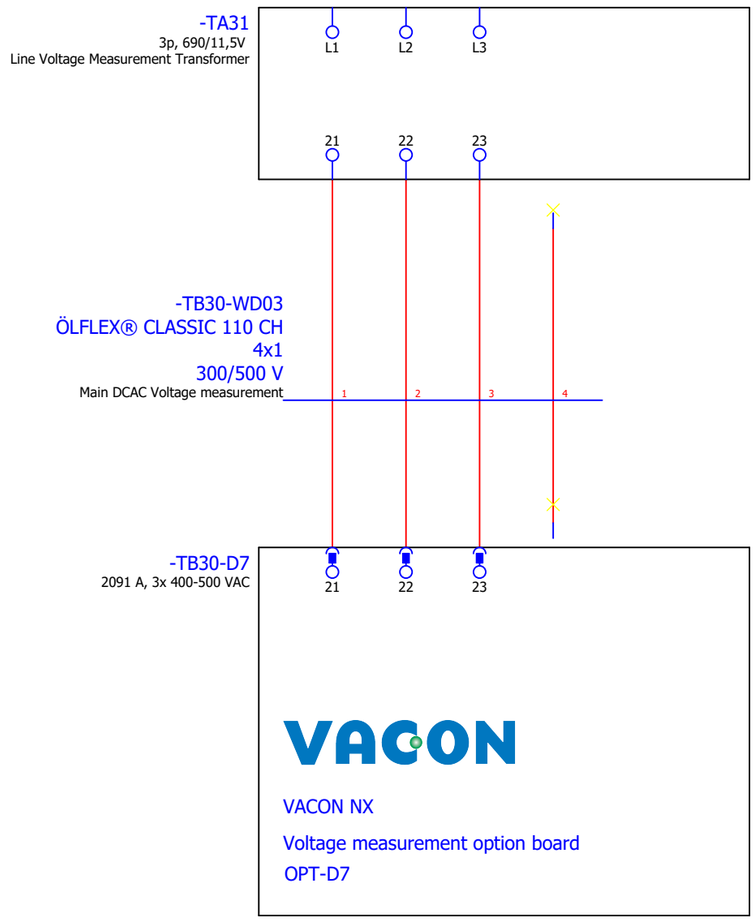
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | DCAC Converter | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 51 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30+DA03
20ft Container




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | DCAC Converter - Line Voltage Measurement | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 52 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30+DA03
AC Power Output, 20ft Container Inside

29.8 / -FC30-WG01

-FC30-WG01
/53.1
/54.2
/54.2
/55.3
/55.3
ÖLFLEX® CLASSIC 110 CH
18x0,75
300/500 V
Breaker IO Signals

-FC30-WG01 / 54.0

-FC30
Circuit Breaker, Fixed Part

12 14 22 24 32 34 42 44 96 98

-FC30
Circuit Breaker, 2000A

N L1 L2 L3

X:12 14 X:22 24 X:32 34 X:42 44 X:96 98

Q/1 Q/2 Q/3 Q/4 S51

X:Ne+ Ne- X:Rct Rca Ge+ Ge- X:Szi Szo Gzi Gzo

K51

EXTERNAL NEUTRAL

EKIP DIP
EKIP TOUCH
EKIP HI-TOUCH
EKIP LCD
EKIP HI-LCD
EKIP G TOUCH
EKIP G HI-TOUCH
EKIP G LCD
EKIP G HI-LCD

I >
I >>
I >>
I >>>
I >>

EKIP TOUCH
EKIP HI-TOUCH
EKIP LCD
EKIP HI-LCD
EKIP G TOUCH
EKIP G HI-TOUCH
EKIP G LCD
EKIP G HI-LCD

Szi (DFi) Szo (DFo) Gzi (DBi) Gzo (DBo)

N L1 L2 L3

X:11 X:21 X:31 X:41 X:95

X:Szc

ABB

-FC30
Circuit Breaker, Fixed Part

11 24V 21 24V 31 24V 41 24V 95

-FC30-WG01
/53.2
ÖLFLEX® CLASSIC 110 CH
18x0,75
300/500 V
Breaker IO Signals

10

10

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

| REVISION INFORMATION |
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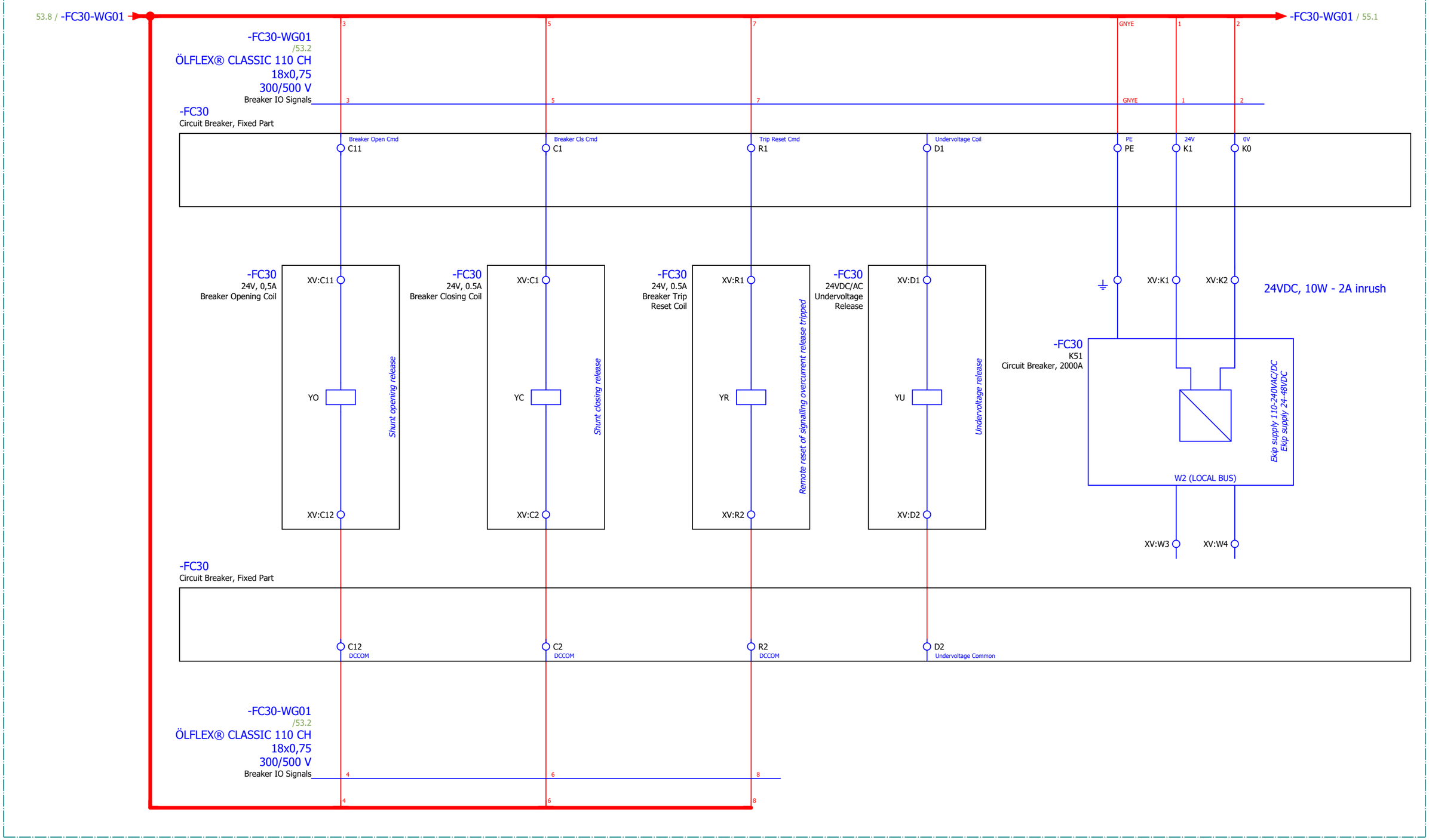
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | 10ft Container - Main Breaker and Aux Contacts | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 53 / 81 |

FRM5103656/0B

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30+DA03
AC Power Output, 20ft Container Inside




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| DATE |
| 29-Sep-25 |

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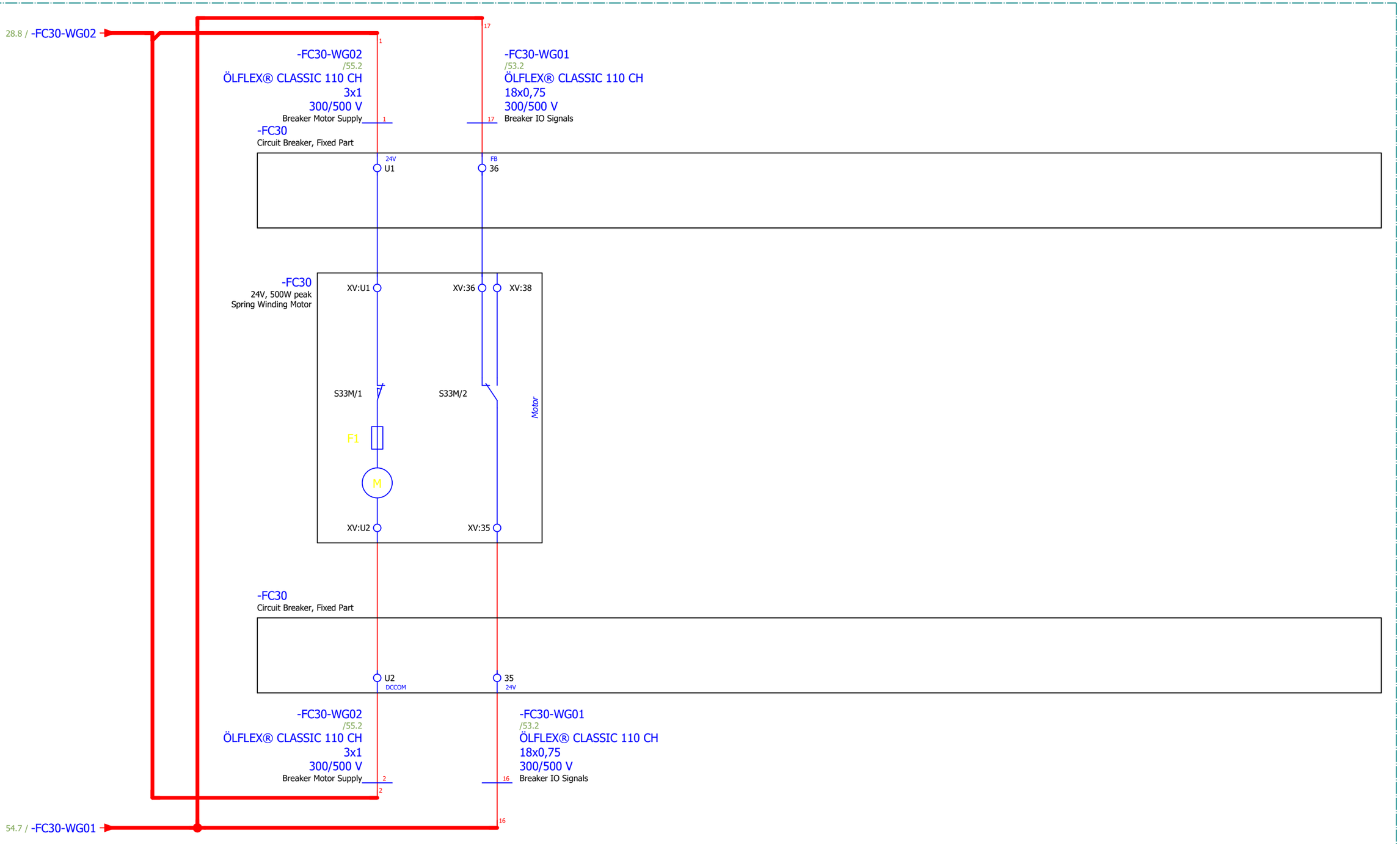
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | 10ft Container - Main Breaker Coils | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 54 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30+DA03
AC Power Output, 20ft Container Inside




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

| REVISION INFORMATION |
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| DESCRIPTION |
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| DATE |
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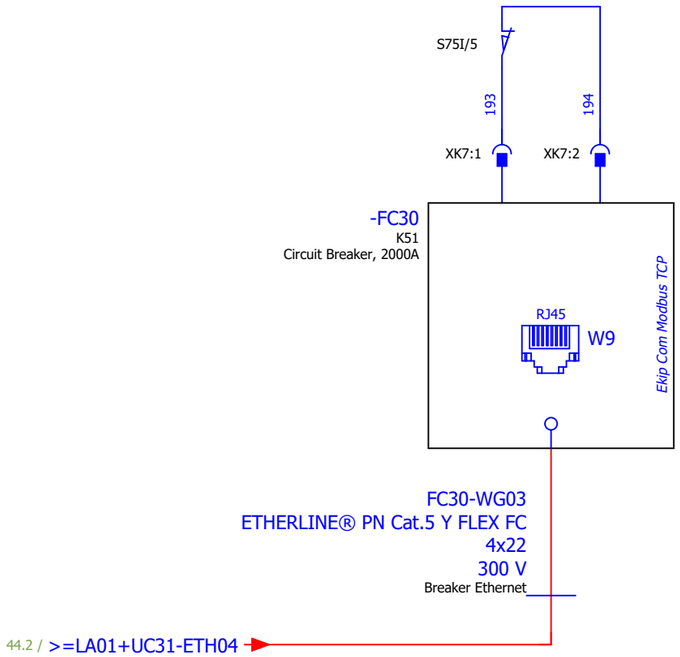
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | 10ft Container - Main Breaker, Motor | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 55 / 81 |

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|

=BA30+DA03
AC Power Output, 20ft Container Inside




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C03 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Customer Interface Diagram, ??? | | |
| SHEET TYPE/DESC | 10ft Container - Main Breaker, Communication | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 56 / 81 |

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Panel Documentation

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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| REVISION INFORMATION | |
| DESCRIPTION | |
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| DATE | |
| 29-Sep-25 | |

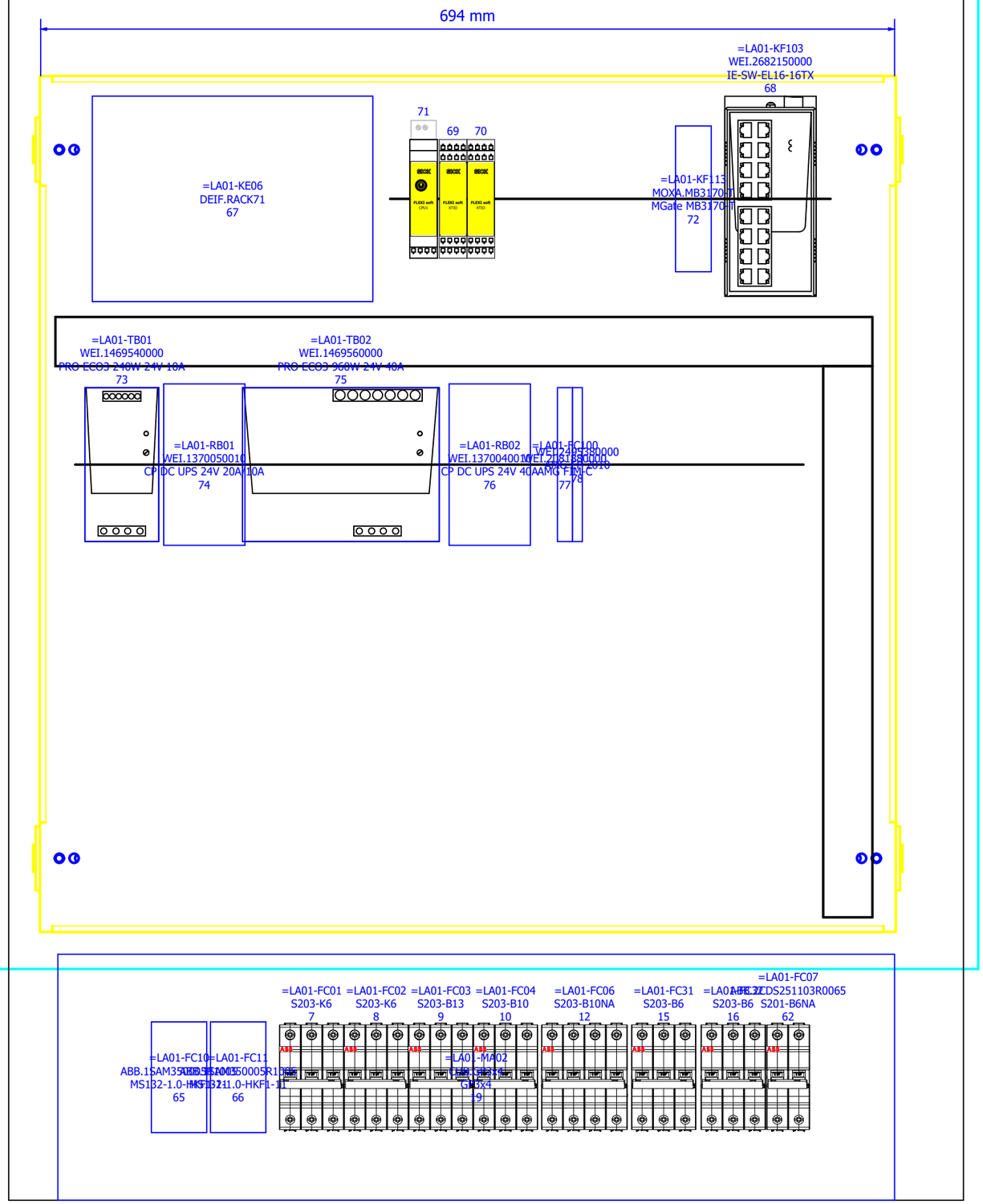
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Panel Documentation and Layout | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 57 / 81 |

FRM5103656/0B




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Panel Layout | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 58 / 81 |

# Enclosure legend

| Item number | Device tag | Type number | Part number | Manufacturer | Function text |
|---|---|---|---|---|---|
| 7 | FC01 | S203-K6 | ABB.2CDS253001R0377 | ABB | |
| 8 | FC02 | S203-K6 | ABB.2CDS253001R0377 | ABB | |
| 9 | FC03 | S203-B13 | ABB.2CDS253001R0135 | ABB | |
| 10 | FC04 | S203-B10 | ABB.2CDS253001R0105 | ABB | |
| 12 | FC06 | S203-B10NA | ABB.2CDS253103R0105 | ABB | |
| 15 | FC31 | S203-B6 | ABB.2CDS253001R0065 | ABB | |
| 16 | FC32 | S203-B6 | ABB.2CDS253001R0065 | ABB | |
| 19 | MA02 | GP3x4 | CUB.GP3x4 | CUB | |
| 62 | FC07 | S201-B6NA | ABB.2CDS251103R0065 | ABB | |
| 65 | FC10 | MS132-1.0-HKF1-11 | ABB.1SAM350005R1005 | ABB | MMS - Busbar Voltage Sense |
| 66 | FC11 | MS132-1.0-HKF1-11 | ABB.1SAM350005R1005 | ABB | MMS - Customer Voltage Sense |
| 67 | KE06 | | DEIF.RACK71 | DEIF | Controller Extension Rack |
| 68 | KF103 | IE-SW-EL16-16TX | WEI.2682150000 | WEI | 16port 100/10 Ethernet Switch |
| 69 | KE21 | FX3-XTIO84002 | SICK.1044125 | SICK | |
| 70 | KE22 | FX3-XTIO84002 | SICK.1044125 | SICK | |
| 71 | KE20 | FX3-CPU130002 | SICK.1043784 | SICK | |
| 72 | KF113 | MGate MB3170-T | MOXA.MB3170-T | MOXA | Gateway, 20ft |
| 73 | TB01 | PRO ECO3 240W 24V 10A | WEI.1469540000 | WEI | 24V PSU |
| 74 | RB01 | CP DC UPS 24V 20A/10A | WEI.1370050010 | WEI | 24V UPS Module |
| 75 | TB02 | PRO ECO3 960W 24V 40A | WEI.1469560000 | WEI | 24V PSU |
| 76 | RB02 | CP DC UPS 24V 40A | WEI.1370040010 | WEI | 40A UPS Module |

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Enclosure Legend | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 59 / 81 |

# Terminal-strip overview

F14_001

| Terminal strip | Terminal strip definition text | Terminals | | | | | Graphical page of terminal diagrams |
|---|---|---|---|---|---|---|---|
| | | first | last | Total PE | Total N | Total number | |
| =BA30-XD41 | | 1 | 2 | 0 | 0 | 2 | |
| =LA01-FC101-1 | | 1 | 1 | 0 | 0 | 1 | |
| =LA01-FC101-2 | | 2 | 2 | 0 | 0 | 1 | |
| =LA01-FC102-1 | | 1 | 2 | 0 | 0 | 2 | |
| =LA01-FC103-1 | | 1 | 2 | 0 | 0 | 2 | |
| =LA01-FC103-3 | | 3 | 4 | 0 | 0 | 4 | |
| =LA01-FC104-1 | | 1 | 2 | 0 | 0 | 2 | |
| =LA01-FC104-3 | | 3 | 4 | 0 | 0 | 2 | |
| =LA01-XD00 | | 1 | PE | 0 | 0 | 5 | |
| =LA01-XD01 | | 1 | 6 | 3 | 0 | 30 | |
| =LA01-XD02 | | 1 | PE | 2 | 0 | 8 | |
| =LA01-XD03 | | 1 | PE | 2 | 0 | 6 | |
| =LA01-XD04 | | 1 | 8 | 0 | 0 | 8 | |
| =LA01-XD06 | | 1 | 3 | 0 | 0 | 2 | |
| =LA01-XD09 | | 9 | 14 | 0 | 0 | 6 | |
| =LA01-XD10 | | 1 | 18 | 2 | 0 | 20 | |
| =LA01-XD11 | | 1 | 21 | 0 | 0 | 24 | |
| =LA01-XD20 | | 1 | 38 | 0 | 0 | 38 | |
| =LA01-XD21 | | 1 | 2 | 0 | 0 | 2 | |
| =LA01-XD22 | | 1 | 14 | 0 | 0 | 14 | |
| =LA01-XD23 | | 1 | 4 | 0 | 0 | 4 | |
| =LA01-XD40 | | 1 | PE | 3 | 0 | 12 | |
| =LA01-XE00 | | PE | | 8 | 0 | 8 | |



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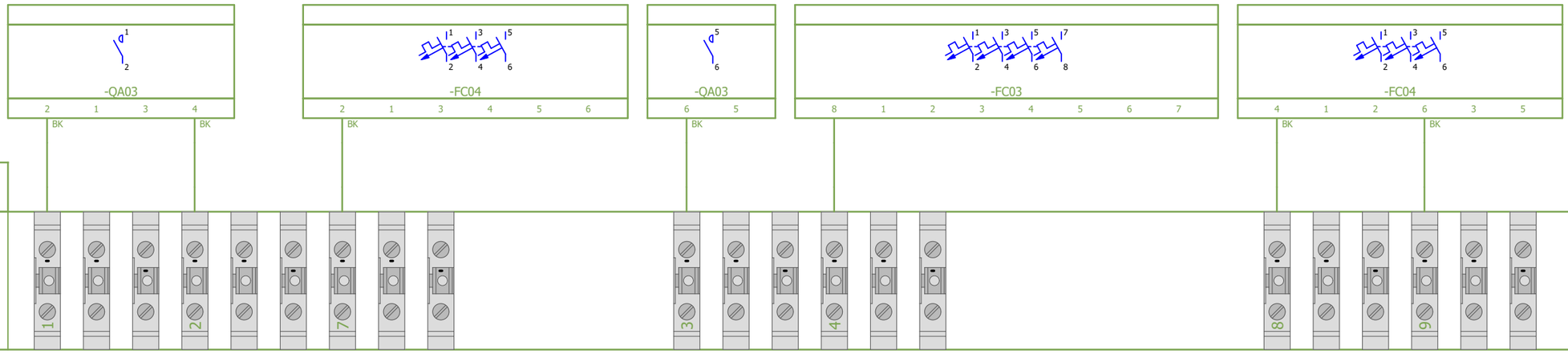
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# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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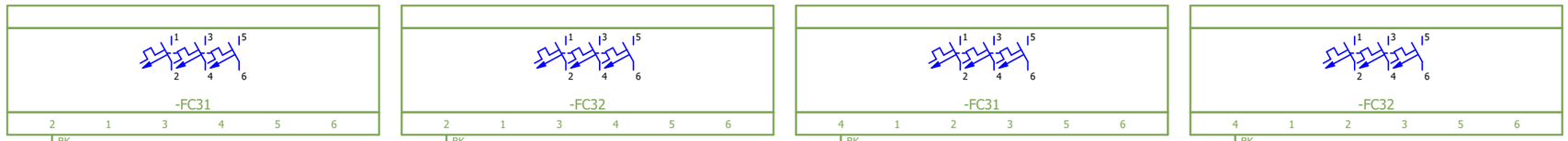
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD01 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 61 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




=LA01+UC31-XD02

Jumpers

Terminal

Connection point




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

| REVISION INFORMATION |
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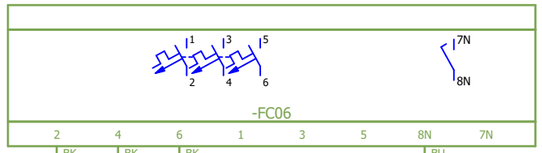
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD02 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 62 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




=LA01+UC31-XD03

Jumpers

Terminal

Connection point




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD03 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 63 / 81 |

FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets

-FC103
2
2 4
-FC103-1
1
1 BU
-FC103-3
3
3 BUWH
-KE06-Slot4
X02:9 X03:22 X02:11 X03:24
VT VT VT VT

=LA01+UC31-XD04

Jumpers

Terminal

Connection point

1 5 2 6 3 4 7 8

=JA01+DA03-QM07-WD01 =JA01+DA03-QM08-WD01 =JA01+DA03-QM07-WD01 =JA01+DA03-QM08-WD01 =JA01+DA03-QM07-WD01 =JA01+DA03-QM08-WD01
ÖLFLEX® CLASSIC 135 CH
1 1 2 2 3 4 3 4
1:2 1:2 2:1 2:1 3:3 4:4 3:3 4:4
=JA01+DA03-AC07 =JA01+DA03-AC08 =JA01+DA03-AC07 =JA01+DA03-AC08 =JA01+DA03-AC07 =JA01+DA03-AC08
1 1 2 2 3 3
RD RD BK BK WH OR WH OR
2 2 1 1 3 5 3 5
=JA01+DA03-QM07.MA01 =JA01+DA03-QM08.MA01 =JA01+DA03-QM07.MA01 =JA01+DA03-QM08.MA01 =JA01+DA03-QM07.MA01 =JA01+DA03-QM08.MA01
2 2 1 1 3 3

External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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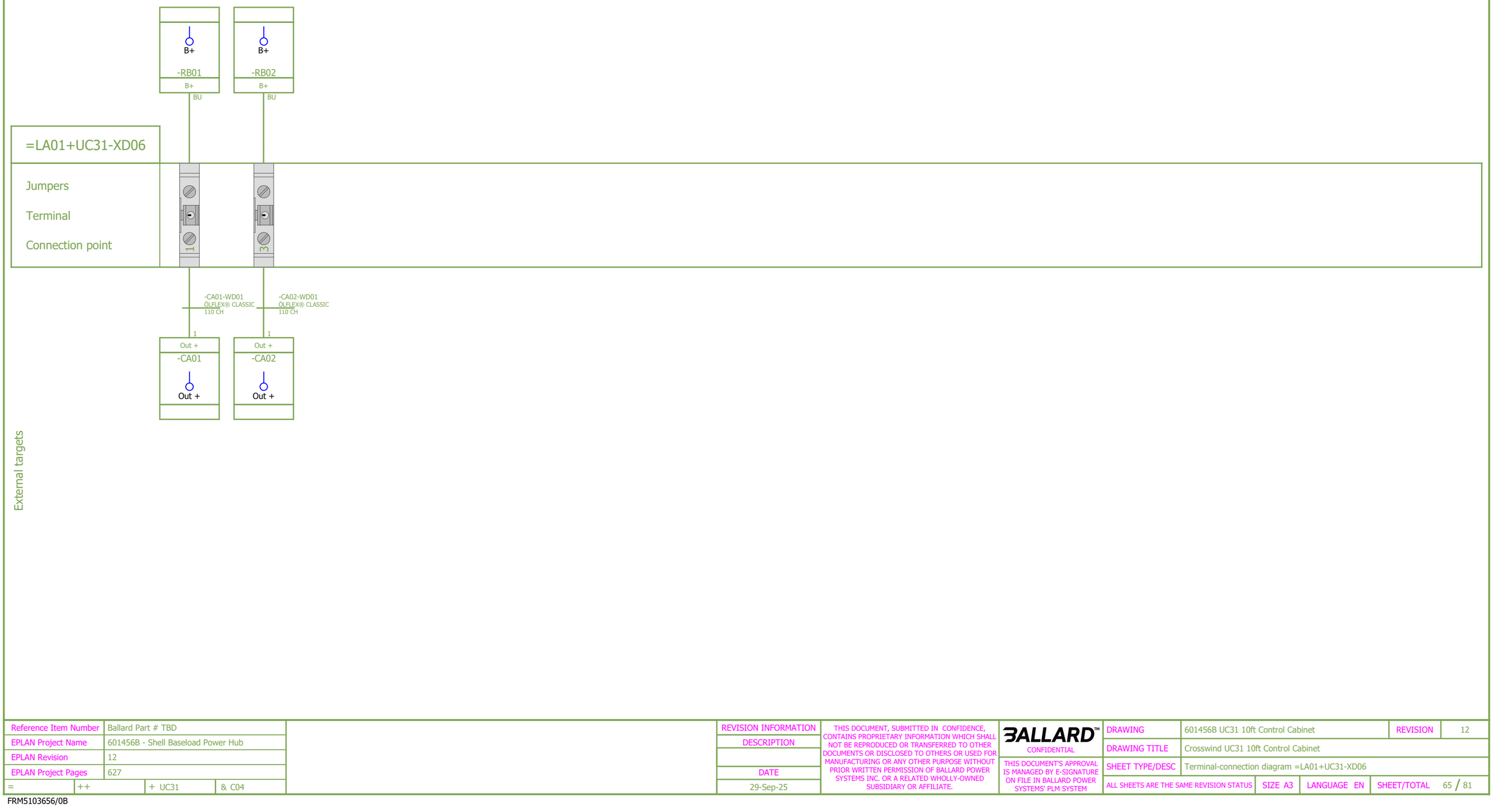
| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD04 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 64 / 81 |

FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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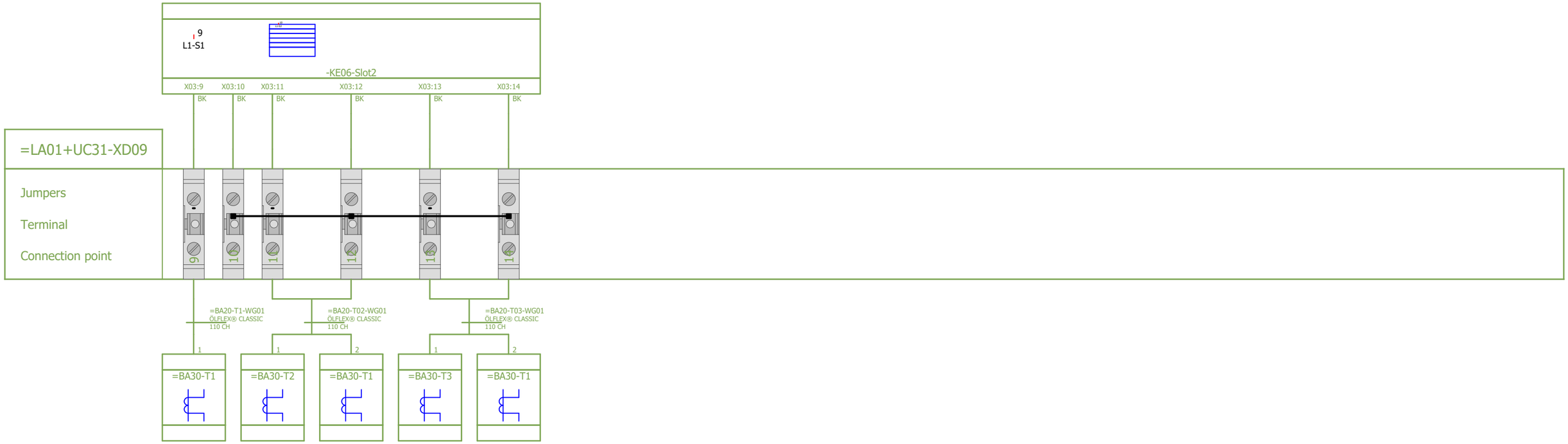
| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD06 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 65 / 81 |

FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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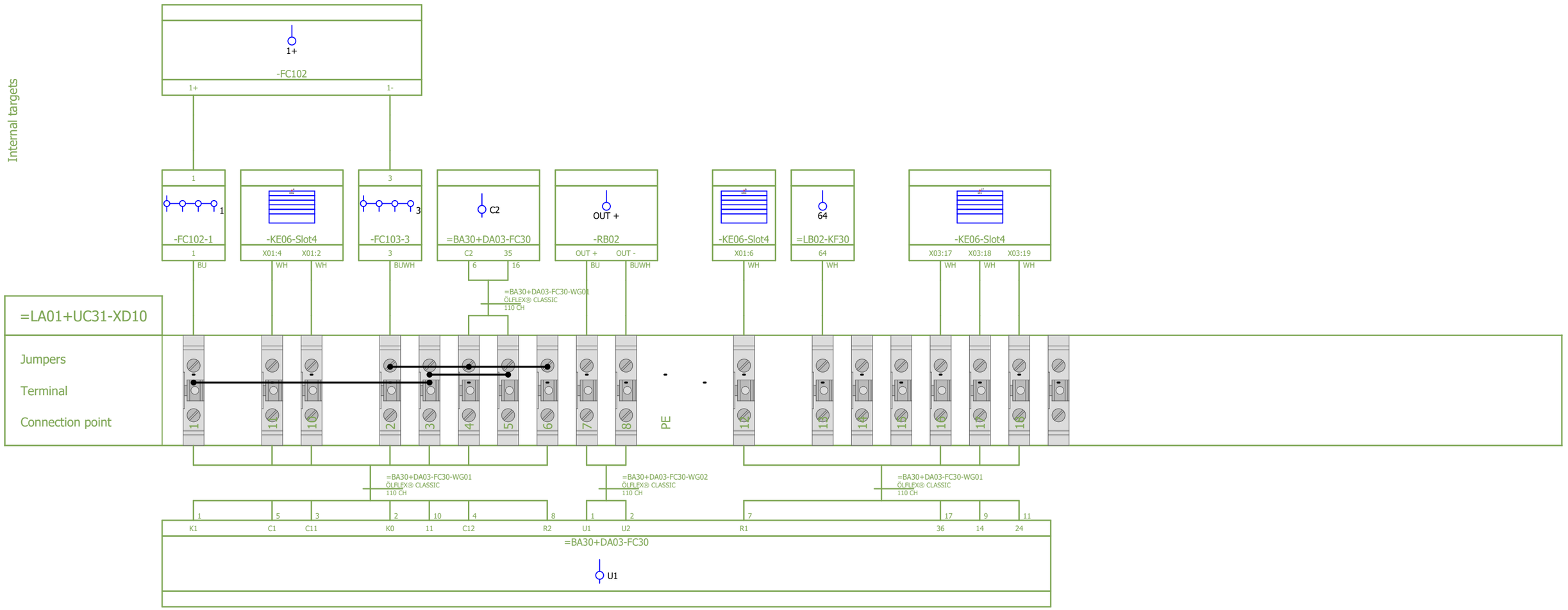
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD09 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 66 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

| REVISION INFORMATION |
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| DATE |
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| | | | |
|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD10 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 67 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets

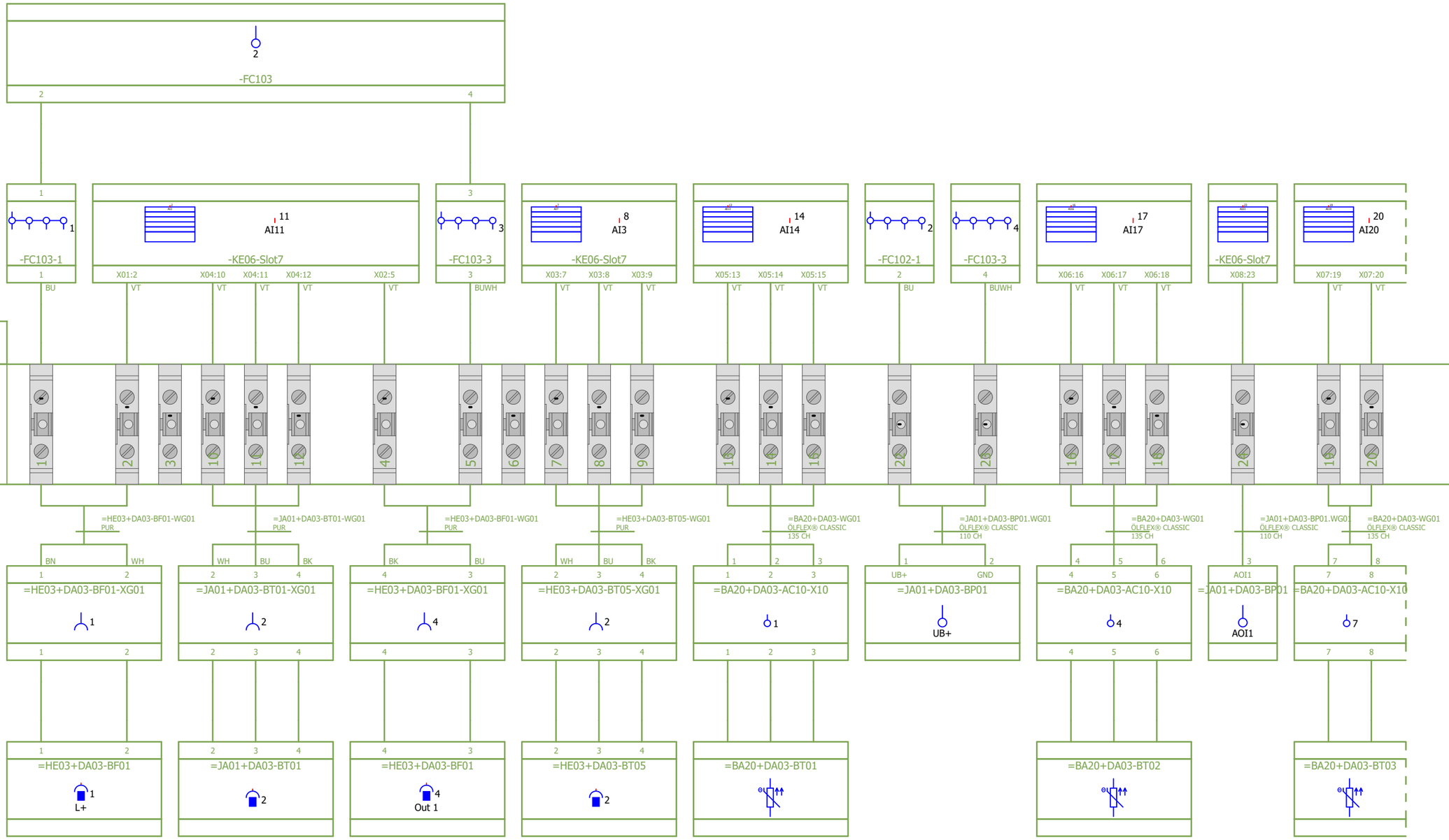
External targets

=LA01+UC31-XD11

Jumpers

Terminal

Connection point




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD11 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 68 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets

External targets

=LA01+UC31-XD20

Jumpers

Terminal

Connection point

-FC104
2
2 4

=LB02-KF30
24
24 34 44 54
WH WH WH WH

=LB02-KE22
X1 I5 X2 I6 I7 I8 I3
WH WH WH WH WH WH WH

-FC104-1
1
1
BU

=LB02-KE22
Q1 I1 I2
WH WH WH

-FC104-3
3
3
BUWH

=LB02-KE21
X1
WH

-BB01
11
-X1:11
WH

=LB02-KE21
I1 I2
WH WH

=BA30+DA03-TB30-WG01
Unitronic FD CP (TP)
2x2x0,5
WH BN GN YE
AF:2 AF:1 AF:3 AF:4
=BA30+DA03-TB30-AF
2

=LB02+DA03-BG01.WG01
BN WH BU BK
1 2 3 4
=LB02+DA03-BG01.XG01
1
1 2 3 4
=LB02+DA03-BG01
1

=LB02+DA03-BG02.WG01
BN WH BU BK
1 2 3 4
=LB02+DA03-BG02.XD01
1
1 2 3 4
=LB02+DA03-BG02
1

21 31 22 32
=LB02+DA03-SG03
21 31
22 32

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD20 | | |
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# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets

External targets

=LA01+UC31-XD20

Jumpers

Terminal

Connection point

-FC104
2
2 4

=LB02-KF30
24
24 34 44 54
WH WH WH WH

=LB02-KE22
X1 I5 X2 I6 I7 I8 I3
WH WH WH WH WH WH WH

-FC104-1
1
1
1 BU

=LB02-KE22
Q1 I1 I2
WH WH WH

-FC104-3
3
3
3 BUWH

=LB02-KE21
X1
WH

-BB01
11
-X1:11
WH

=LB02-KE21
I1 I2
WH WH

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

=BA30+DA03-TB30-WG01
Unitronic FD CP (TP)
2x2x0,5
WH BN GN YE
AF:2 AF:1 AF:3 AF:4
=BA30+DA03-TB30-AF
2

=LB02+DA03-BG01.WG01
BN WH BU BK
1 2 3 4
=LB02+DA03-BG01.XG01
1
1 2 3 4
=LB02+DA03-BG01
1

=LB02+DA03-BG02.WG01
BN WH BU BK
1 2 3 4
=LB02+DA03-BG02.XD01
1
1 2 3 4
=LB02+DA03-BG02
1

21 31 22 32
=LB02+DA03-SG03
21 22 31 32

| | | | |
|---|---|---|---|
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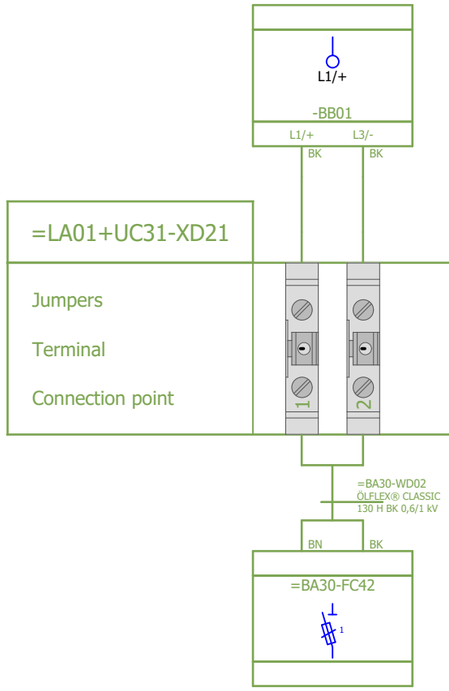
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| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD20 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 70 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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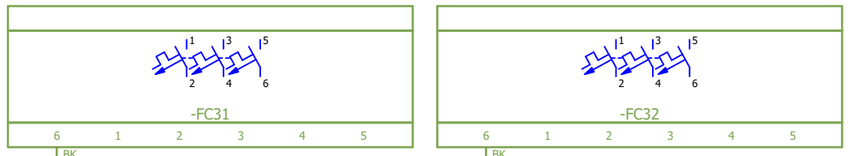
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD21 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 71 / 81 |

FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




=LA01+UC31-XD02

| | | |
|---|---|---|
| Jumpers | - | - |
| Terminal | - | - |
| Connection point | 5 | 6 PE PE |

External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
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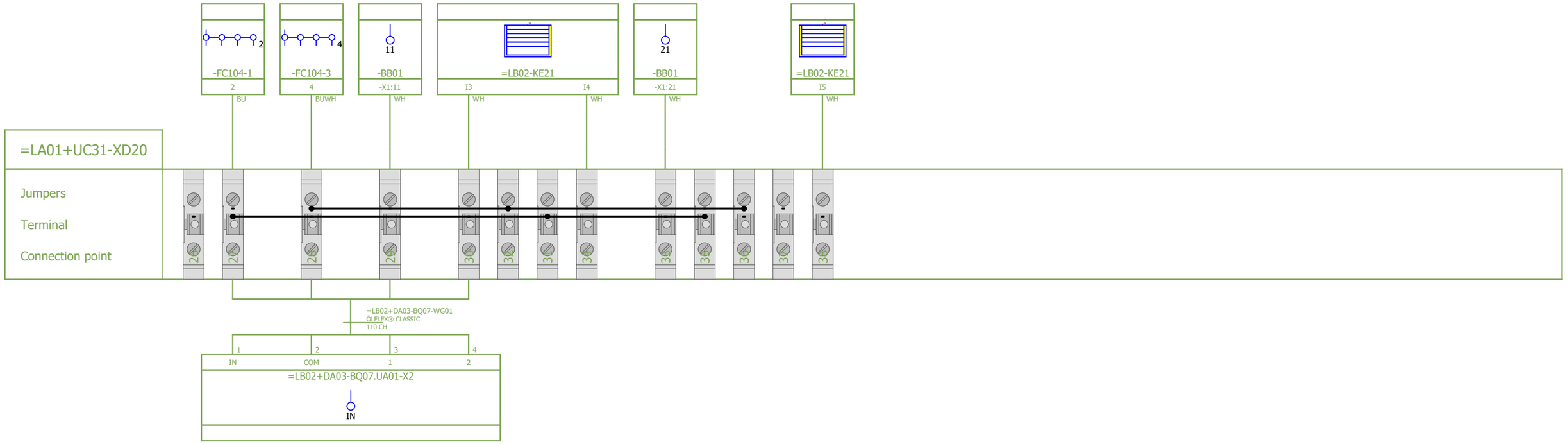
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| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD02 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 72 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
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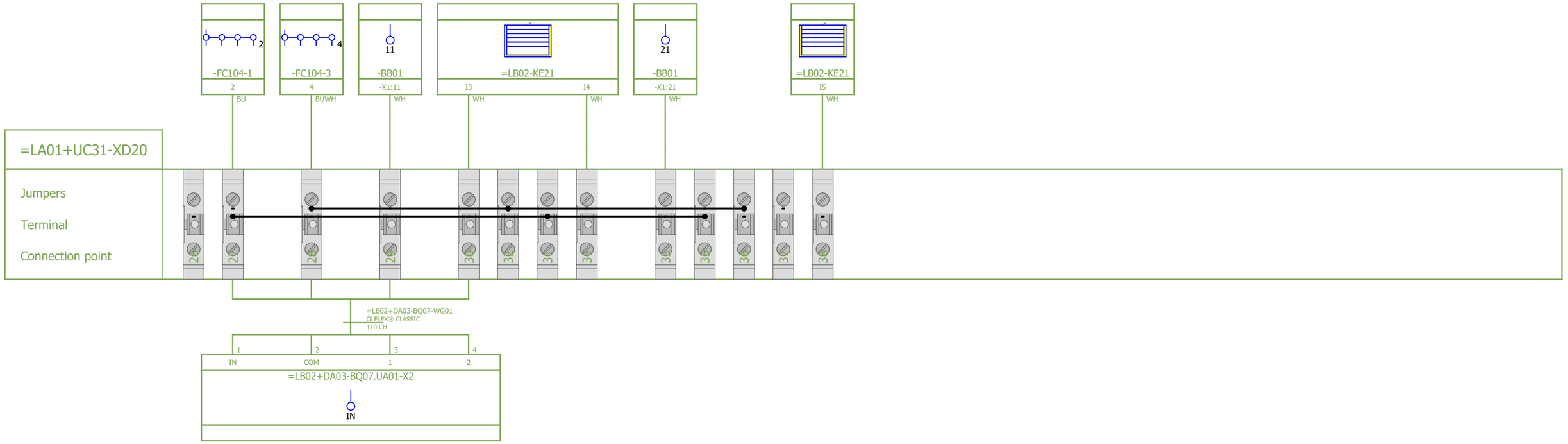
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|---|---|---|---|
| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD20 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 73 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
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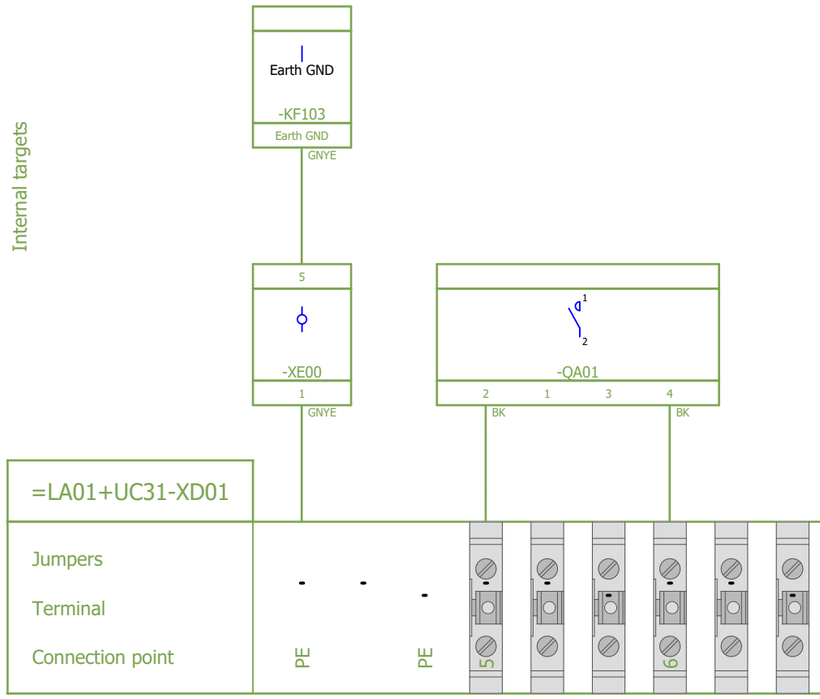
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| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD20 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 74 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
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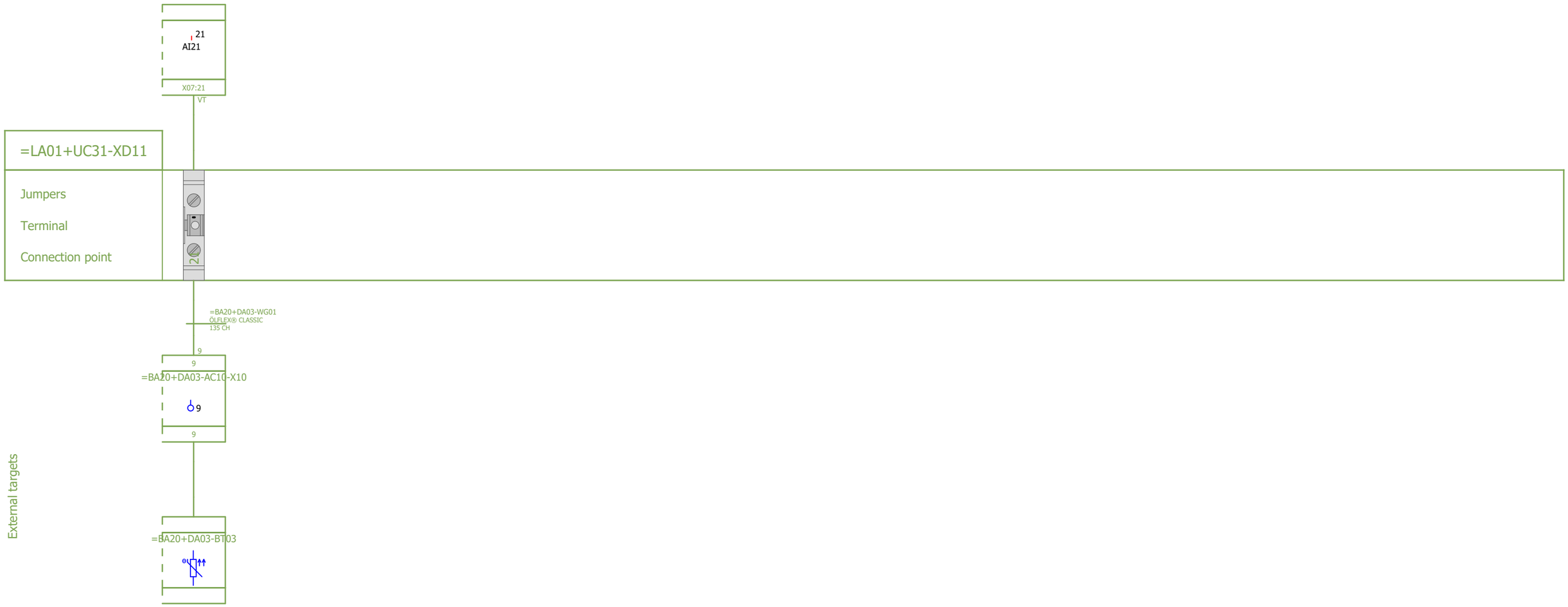
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| DRAWING TITLE | | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD01 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 75 / 81 |

FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
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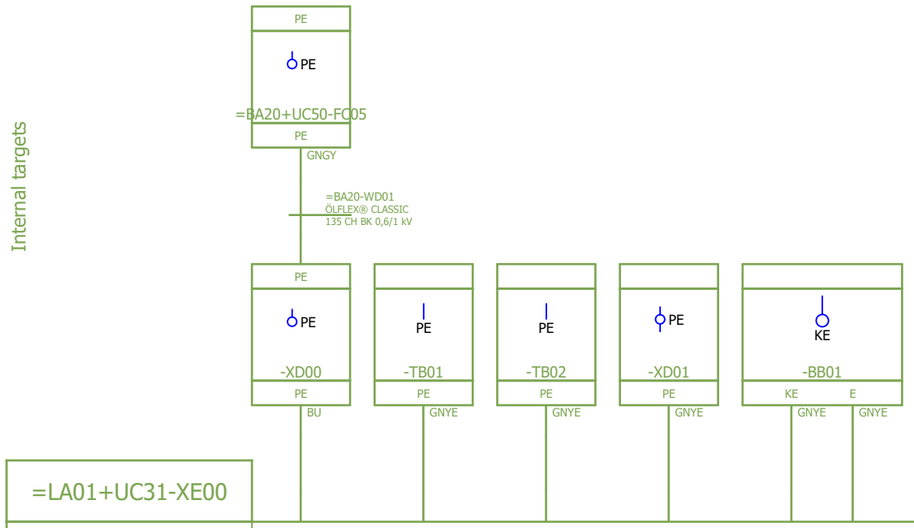
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|---|---|---|---|
| DRAWING | | REVISION | 12 |
| DRAWING TITLE | | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD11 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 76 / 81 |

FRM5103656/0B

# Terminal-connection diagram

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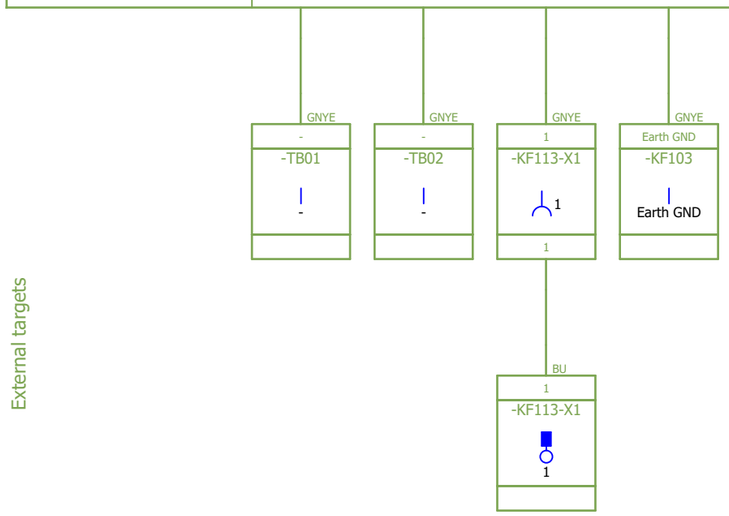
Internal targets




=LA01+UC31-XE00

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Jumpers | - | - | - | - | - | - | - | - |
| Terminal | | | | | | | | |
| Connection point | PE | | PE | | PE | | PE | |

External targets




| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
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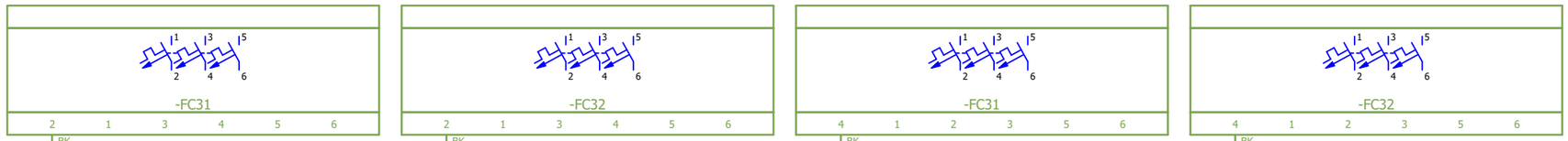
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|---|---|---|---|
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| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XE00 | | |
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FRM5103656/0B

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




=LA01+UC31-XD02

Jumpers

Terminal

Connection point




External targets

| | | | |
|---|---|---|---|
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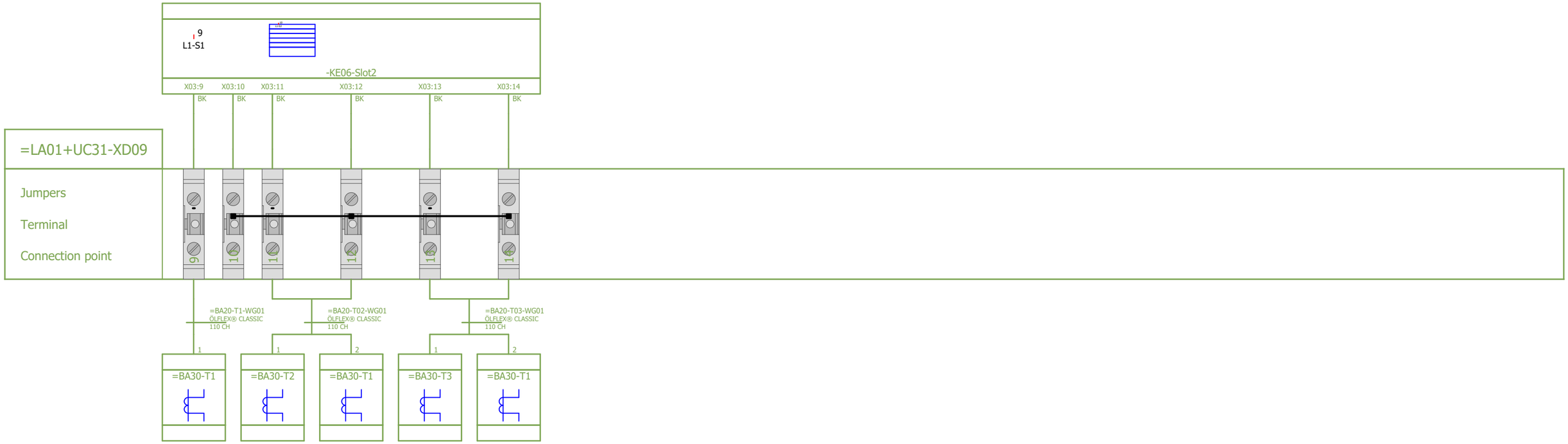
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# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
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| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
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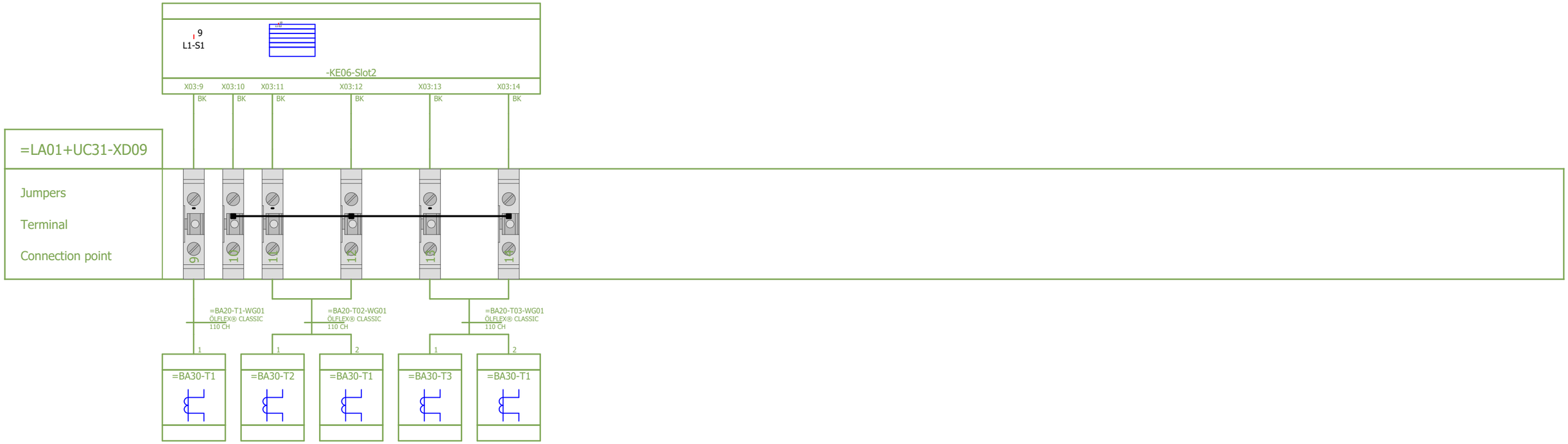
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| DRAWING | 601456B UC31 10ft Control Cabinet | REVISION | 12 |
| DRAWING TITLE | Crosswind UC31 10ft Control Cabinet | | |
| SHEET TYPE/DESC | Terminal-connection diagram =LA01+UC31-XD09 | | |
| ALL SHEETS ARE THE SAME REVISION STATUS | SIZE A3 | LANGUAGE EN | SHEET/TOTAL 79 / 81 |

# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
| EPLAN Project Pages | 627 | | |
| = | ++ | + UC31 | & C04 |

| REVISION INFORMATION |
|---|
| DESCRIPTION |
| |
| DATE |
| 29-Sep-25 |

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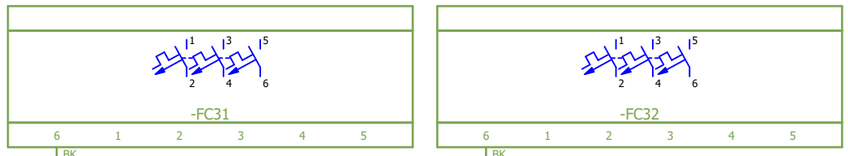
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# Terminal-connection diagram

F11_001
PBL 29-Sep-25

Internal targets




=LA01+UC31-XD02

| | | |
|---|---|---|
| Jumpers | - | - |
| Terminal | 5 | 6 |
| Connection point | | PE PE |

External targets

| | | | |
|---|---|---|---|
| Reference Item Number | Ballard Part # TBD | | |
| EPLAN Project Name | 601456B - Shell Baseload Power Hub | | |
| EPLAN Revision | 12 | | |
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