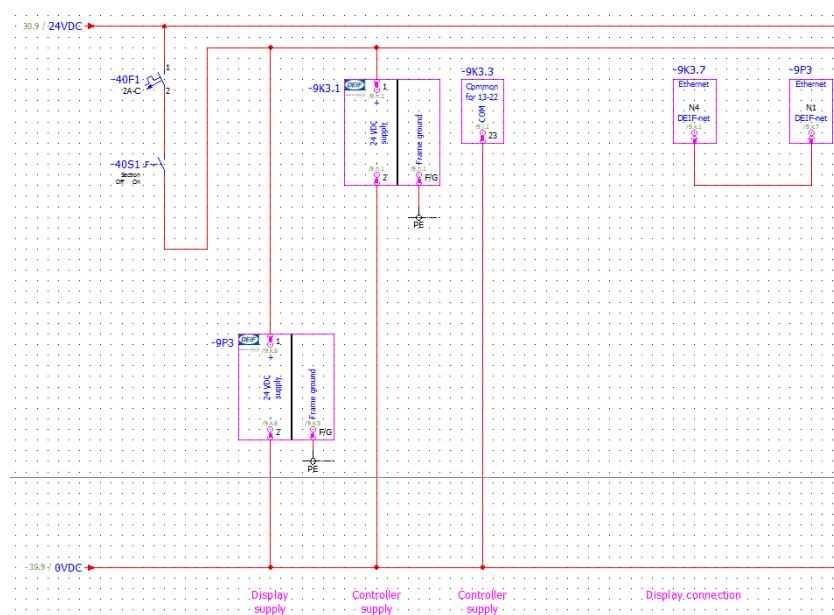


DEIF Multiline 300 Eplan macro user guide





-power in control

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Revision list

Rev	Description/changes	Date (dd-mm-yyyy)
A	First version	29-06-2015
B	Some macros are updated to B-version: Panel layout/graphical macros are simplified. For DU-300 different folios are added. Logo exchanged with new. Added two new cards, IOM3.4 and GAM3.2 (future releases)	24-04-2017

Introduction

The new Multiline 300 controller line by has now been released from DEIF. This document introduces the related Eplan Macros.

As of now the macros consists of:

1. **Diagram macros.** To be used on Eplan standard multiline diagram pages. As DEIF controllers can be perceived as a PLC, the makros are built as PLC-boxes with PLC terminators. The macros are divided into single units, e.g. measurement units or digital inputs for most flexible layout of diagrams
2. **Overview macros.** To be added at (PLC) overview pages. These will contain the article no and the function definition for each unit. The function definition links to the diagrams macro. The overview pages provide cross-references to the pages where the diagram macros are used.
3. **Graphical macros.** To be used when presenting a graphical view of the controller. The graphical macro is also used for 2D panel layout

At a later point 3D ProPanel macros will be added.

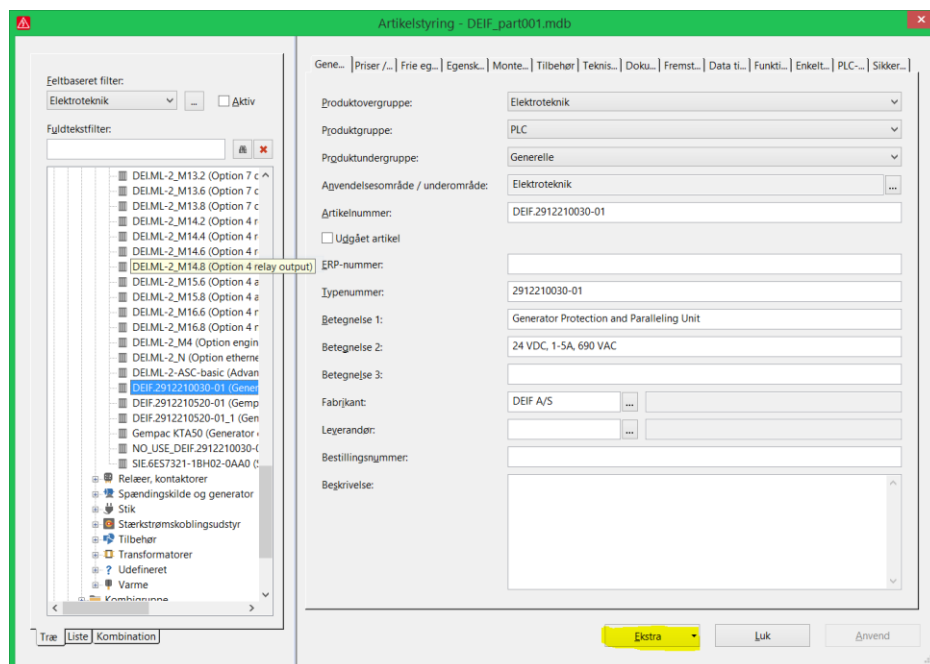
Window captures in this guide is taken from the Danish version of Eplan on an English Windows installation. Please be free to extrapolate to your own languages

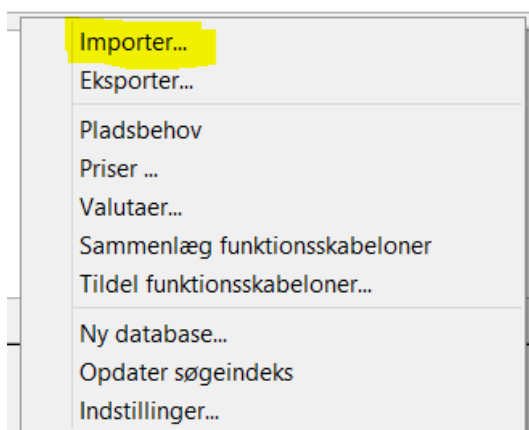
Importing

The macros are downloaded from DEIF's homepage as edz-files which is an Eplan article database exchange format. One edz-file contains the article database entry as well as all macros defined in the article data. The macros will be placed in the right folder structure under the macro folder as specified in the setup -> User -> Administration -> Folders setup in Eplan. Please be aware if the folders are set to local computer or a network drive.

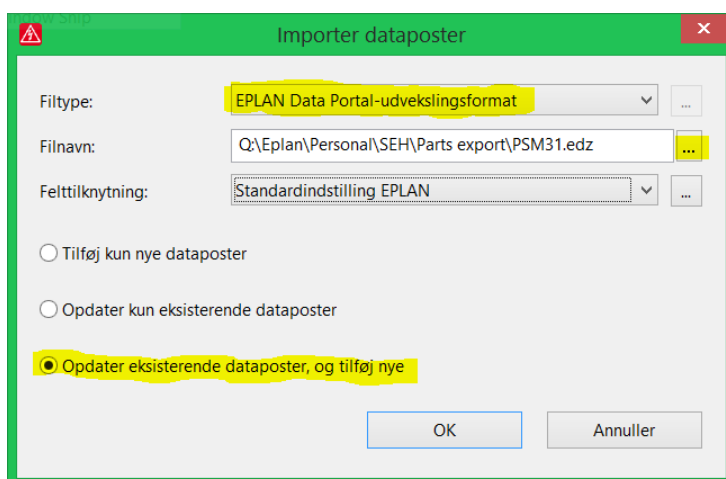
After downloading the procedure for importing is as follows:

1. Open the article administration
2. Press the extra button and choose import

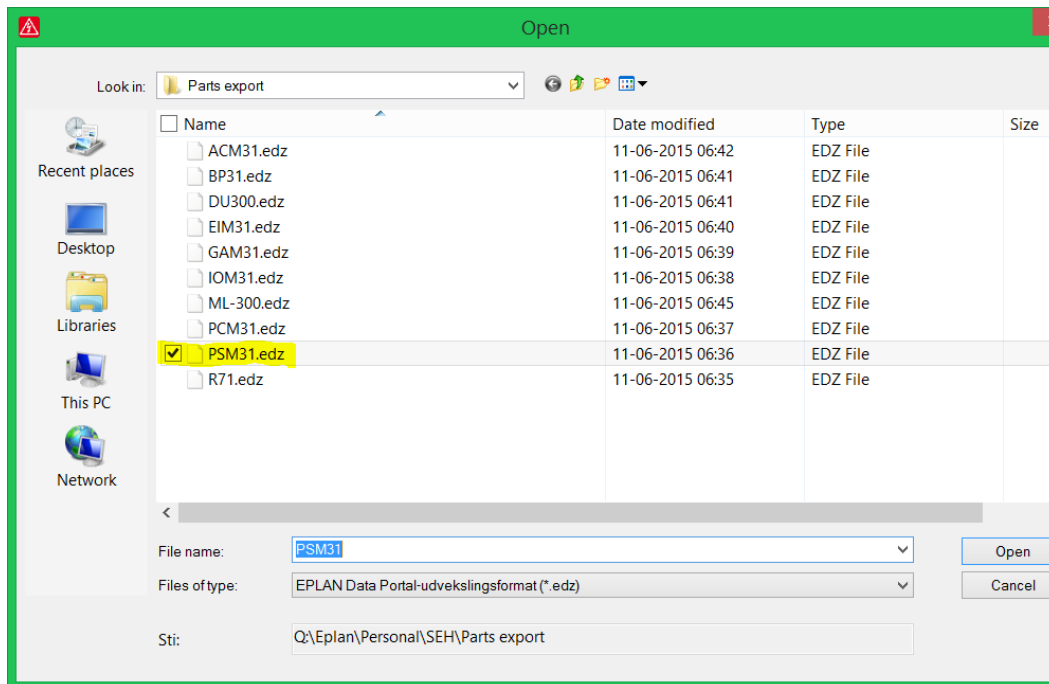




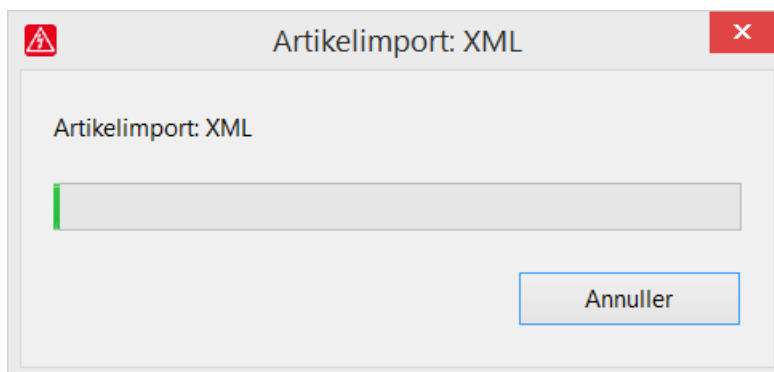
3. Set the file type to 'Eplan data portal exchange format' and choose 'update existing data and add new'



4. Choose the file you want to import and Open
- 5.



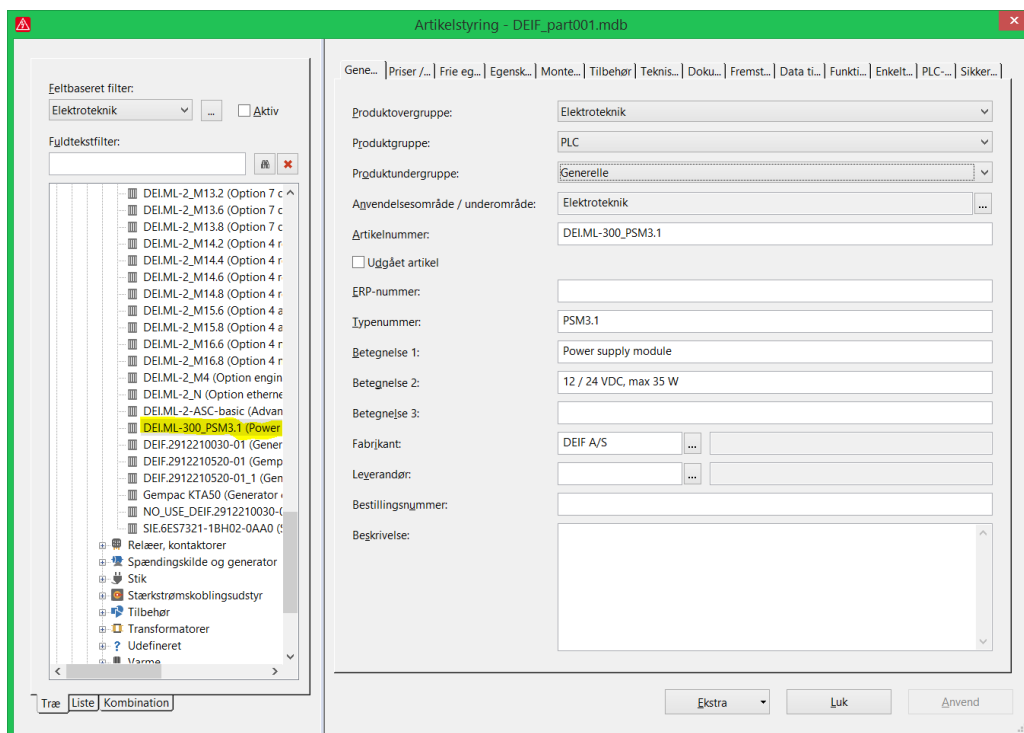
6. Press ok. And the article is imported.
- 7.



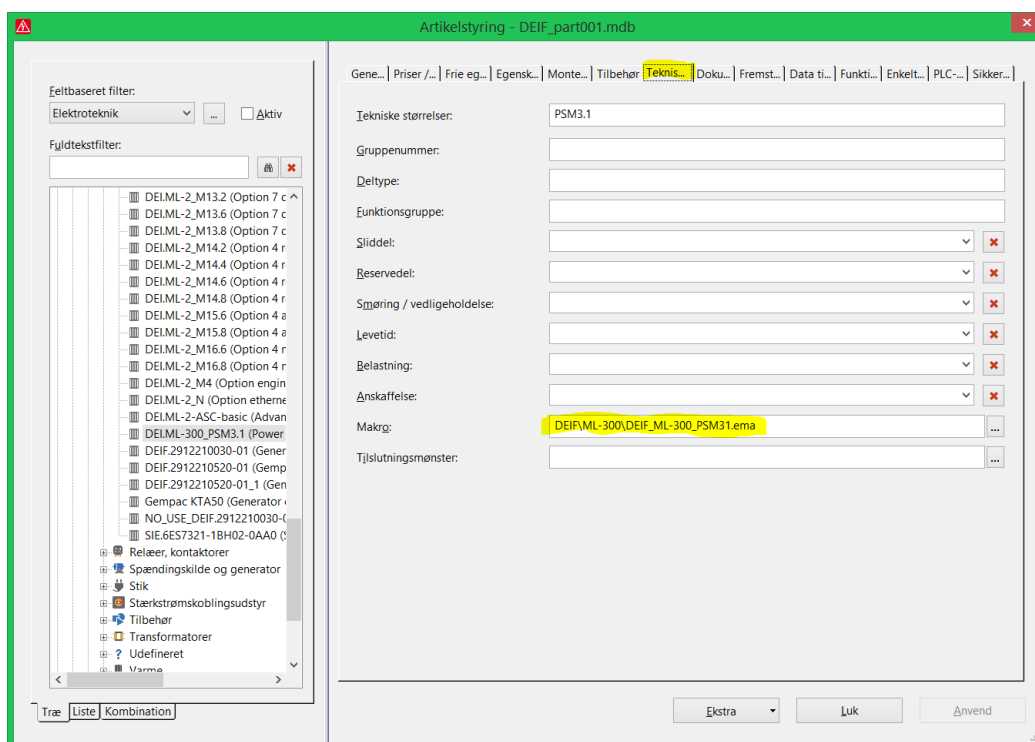
Now the part is imported together with the macros.

*Tip: when selecting several edz-files, all the articles are imported.

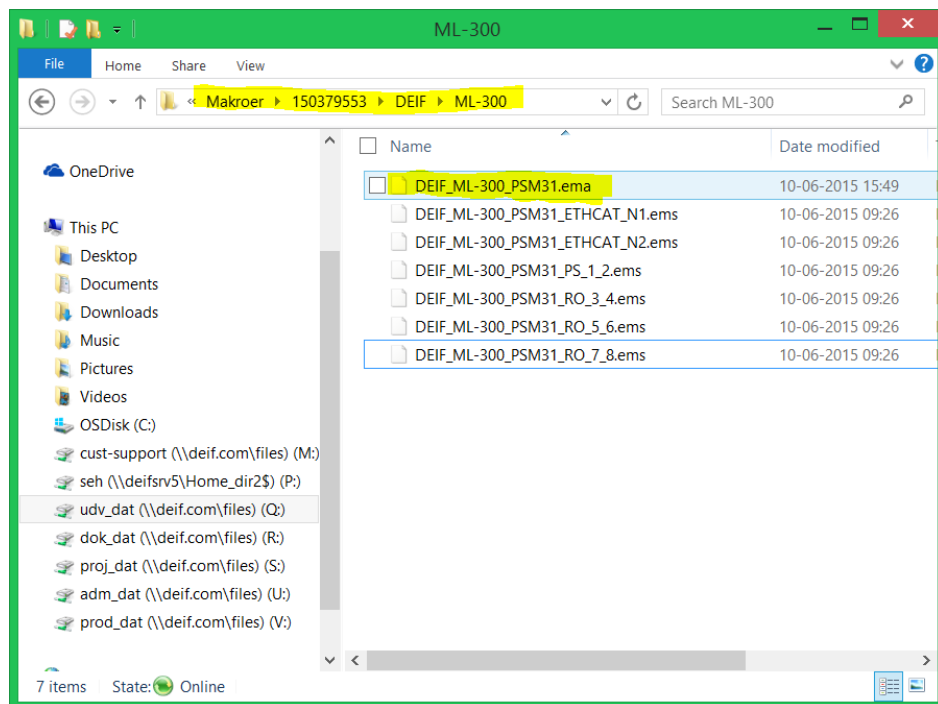
The part can now be found in the article database.



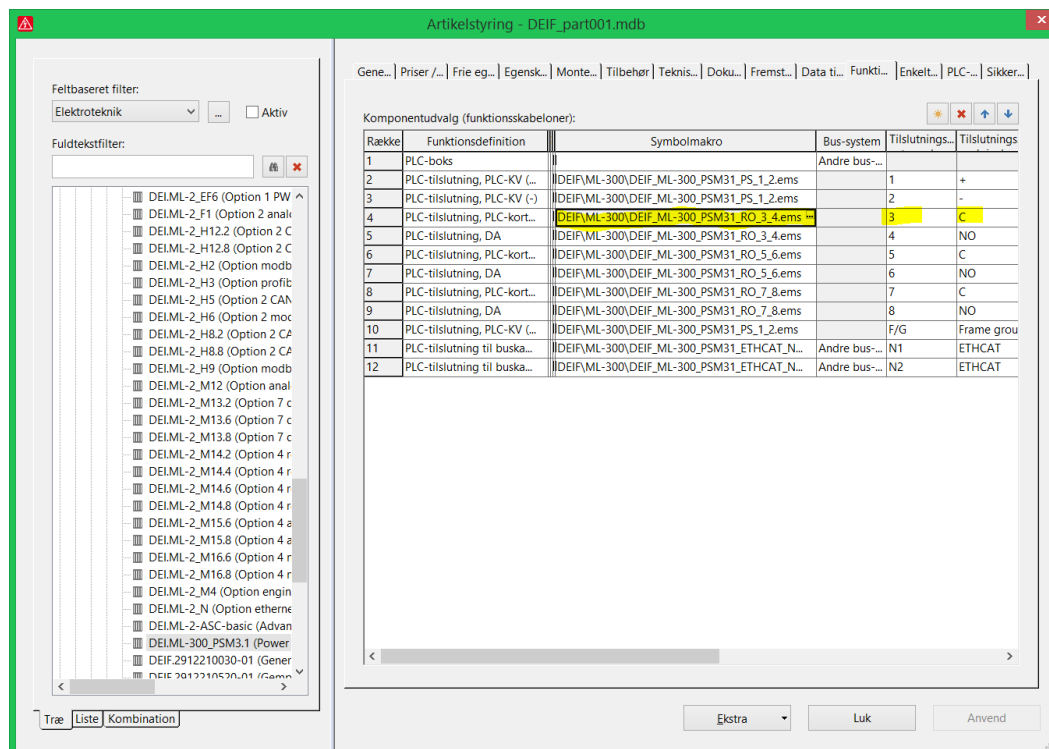
In the technical data tab the link to the macro that contains the graphical macro as well as the overview macro can be found:



Which is now placed in the right folder:

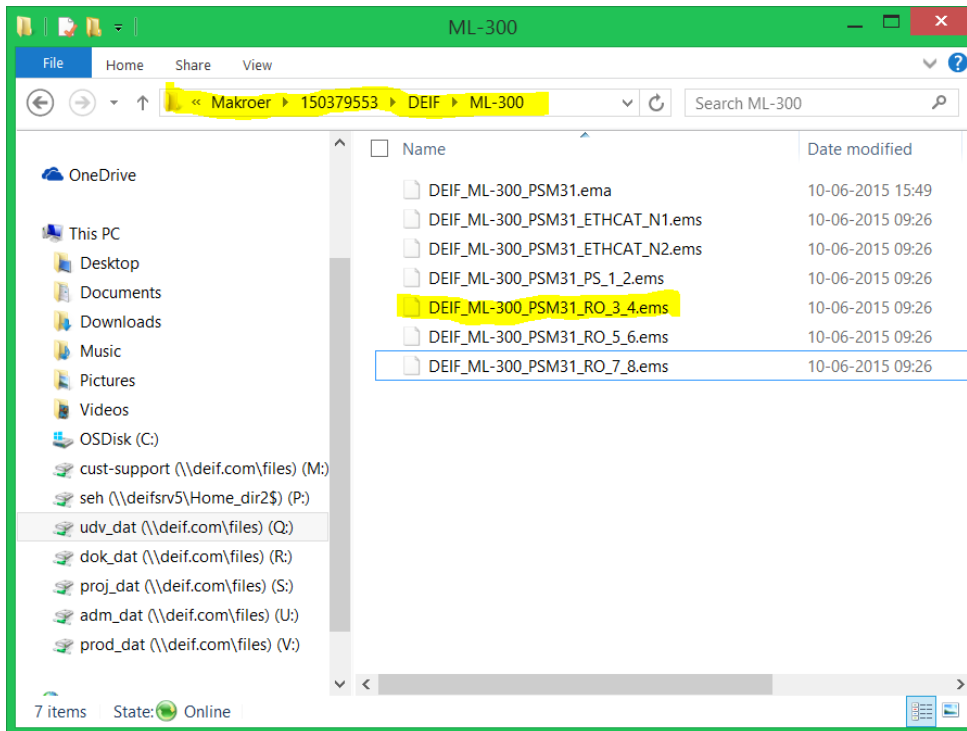


In the function definition tab each connection on the card is linking to a symbol-macro. This is the macro used in the diagram.



This symbol-macro belongs to terminal 3 on the PSM3.1-card and is the common on the status output relay. Some macros represent more terminals and all the terminals will then be imported together in the diagram.

The symbol-macros are also placed in the right folder:



Using DEIF Eplan macros

When using the eplan macros it's recommended to read the DEIF installation manual for the product, and have it available when drawing. The installation manual can be downloaded at www.deif.com

The first step is to create an overview page.

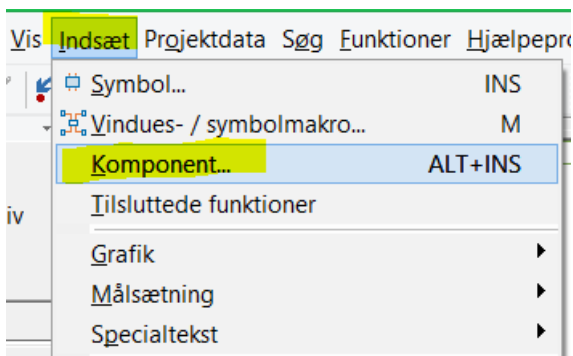
For ML-300, overview pages should have the grid set to 5 mm.

On the overview page the various components of the controller are placed. Each controller consists of:

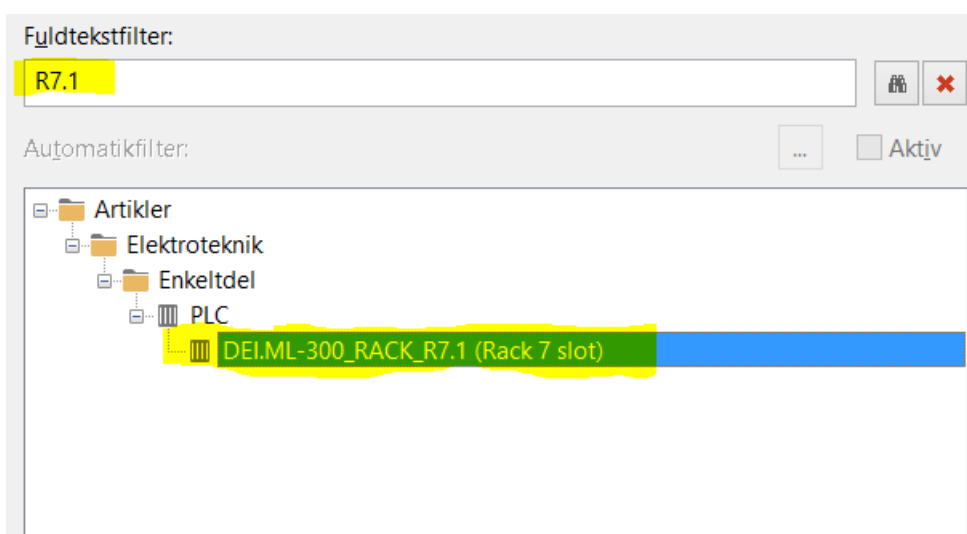
- One rack
- A number of cards
- A number of blind plates to fill out empty slots, if any.
- A display unit, if any

On the first overview page for the controller the rack is placed, that is the overview macro of the rack which contains the article.

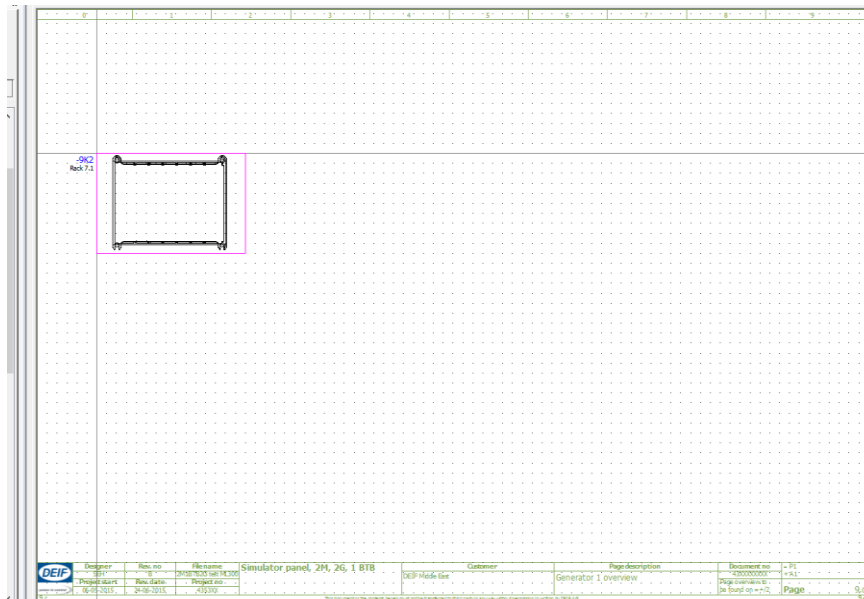
1. Choose Insert->Component and find the rack



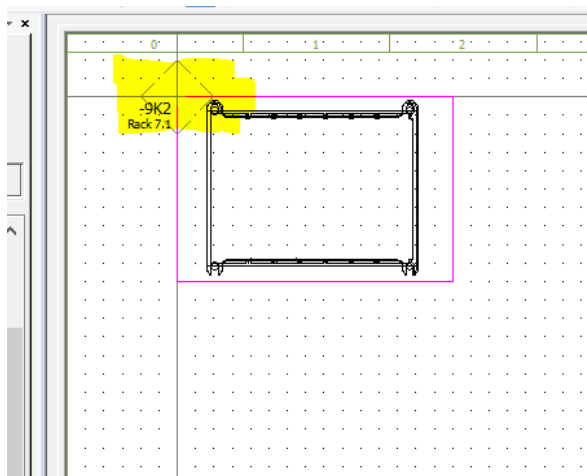
(here the filter is used to find it)



- Because this is an overview page, the overview variant of the rack macro will be inserted. The macro can be freely placed

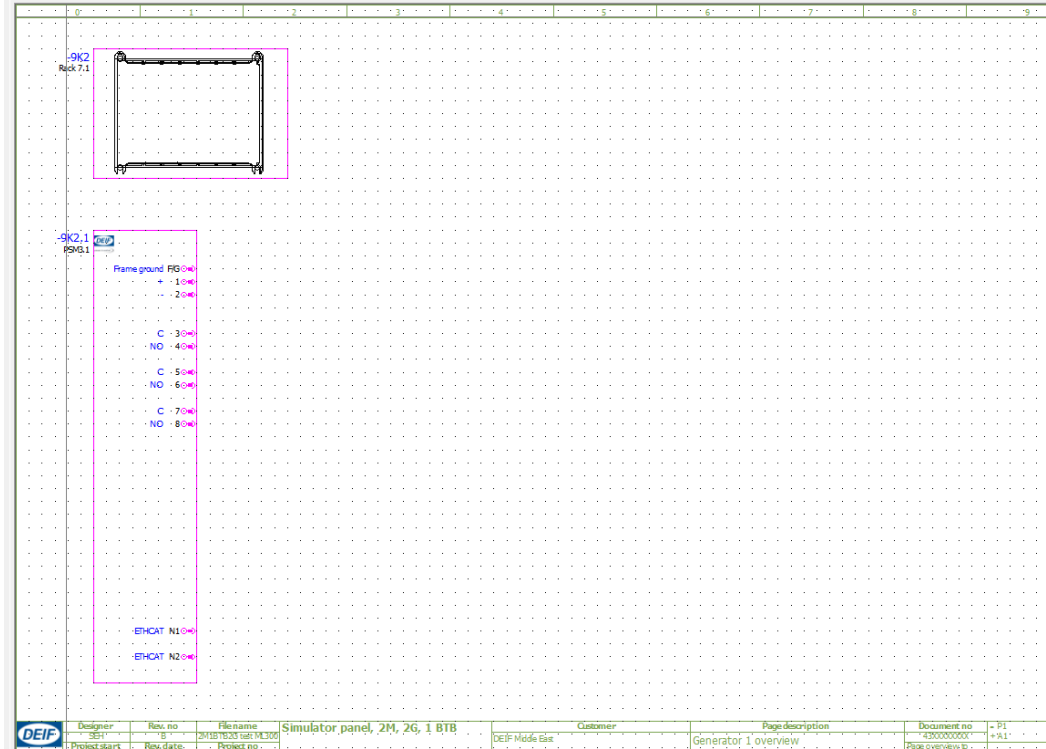


While pressing first X and then Y the macro will be placed in a fixed location on the page.

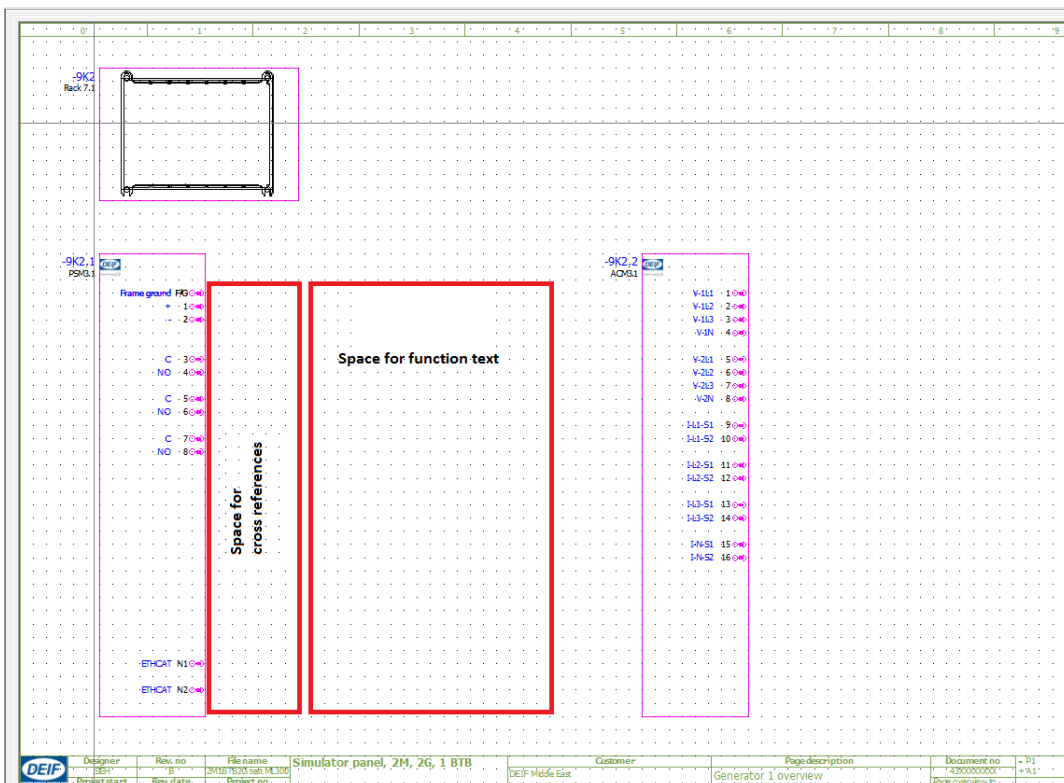


DEIF uses 'prefix-page-designation letter-continuous' designation of components as in this example. Any kind of designation can be used, just the different parts (racks, cards and displays) has different designations. This rack is placed on page 9, and it is the second controller in this project, thus the designation is -9K2.

- The first card, can now be placed which is a PSM3.1 (should be placed in the first slot) can now be placed. Again choose Insert -> Component and find the PSM3.1 module. Place it again with X and Y coordinates. This will place the PSM just below the rack. It may be necessary to re-designate the card. Here to -9K2.1 because it is the first card in the controller.

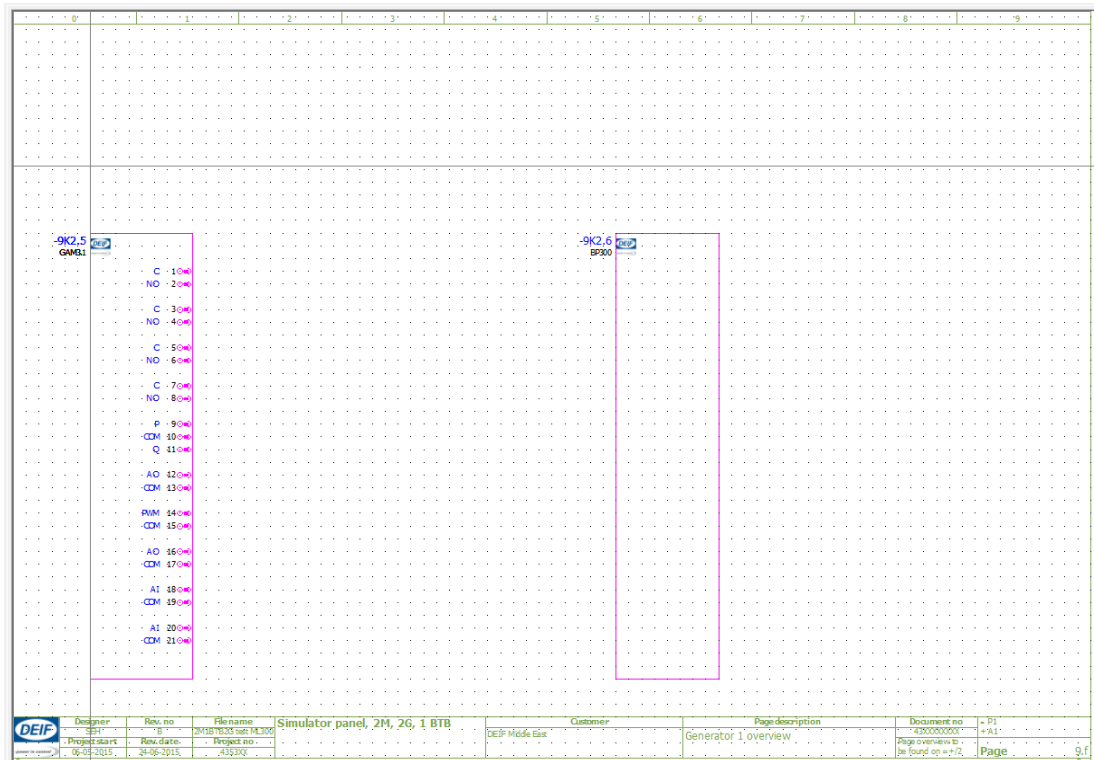
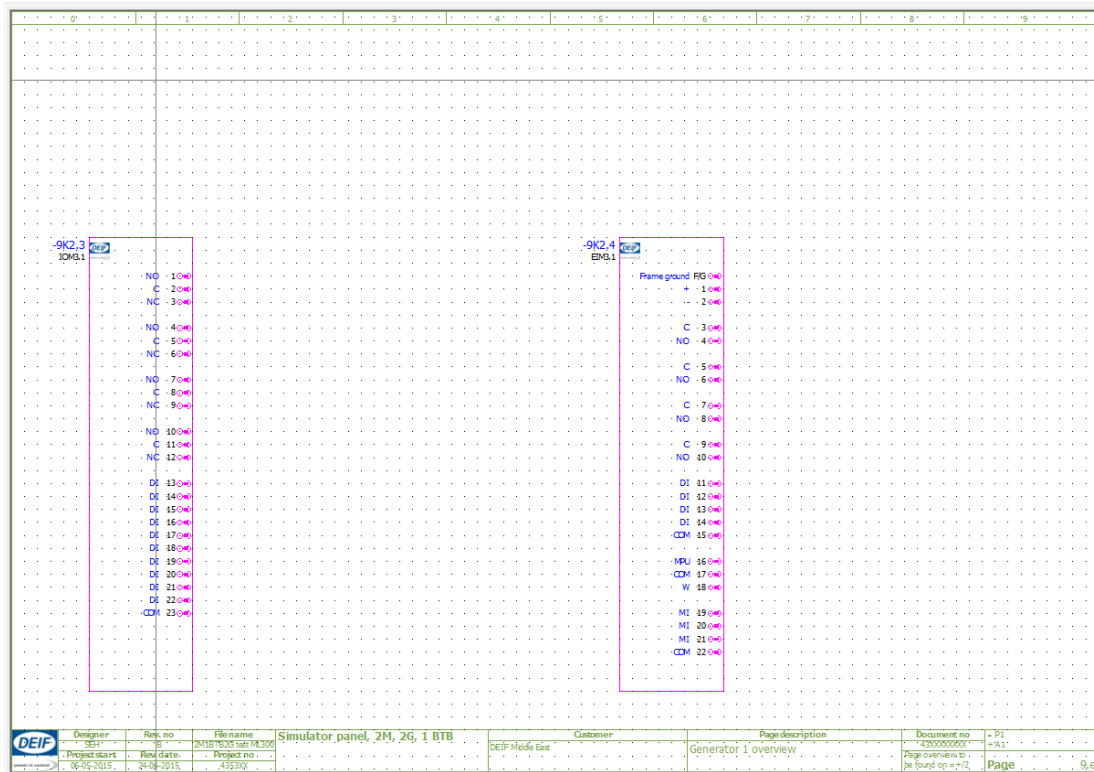


- The second card can now be placed. It is in this instance an ACM3.1. Instead placing it with X and Y, I only fixed the Y direction while pressing Y after getting the macro. It is only possible to place two cards on each page to make space for cross-reference and function text to the right of the terminals.



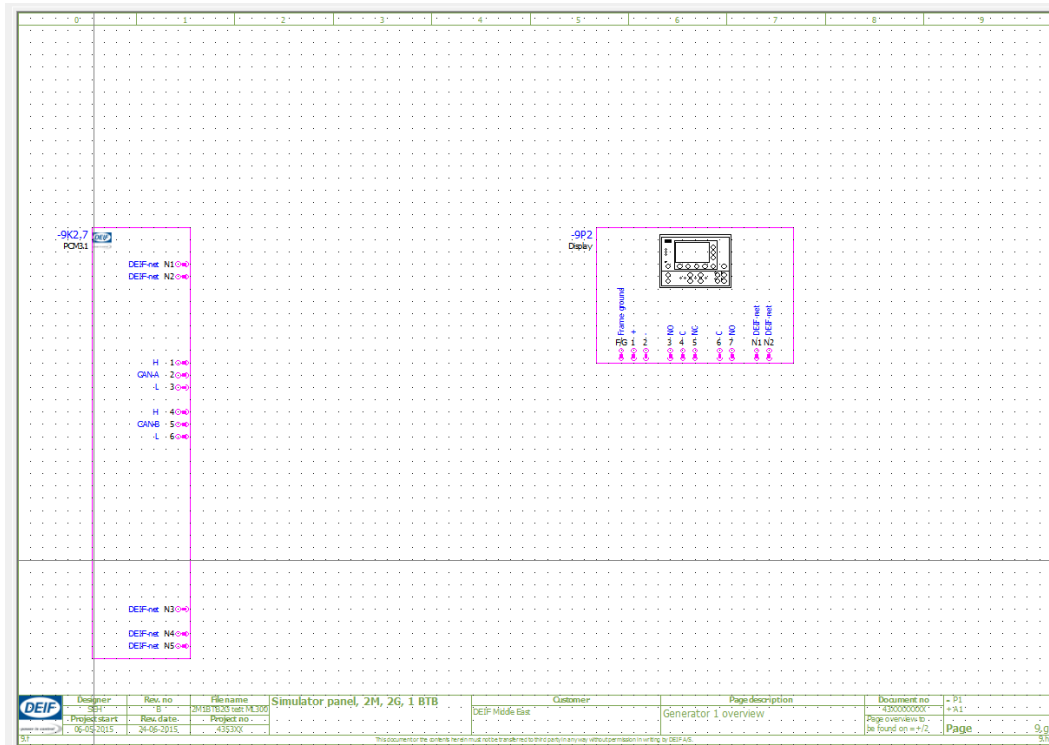


5. Additional cards and blind plates are placed on the following pages to fill all slots.





6. On the last page a display is placed in this project.

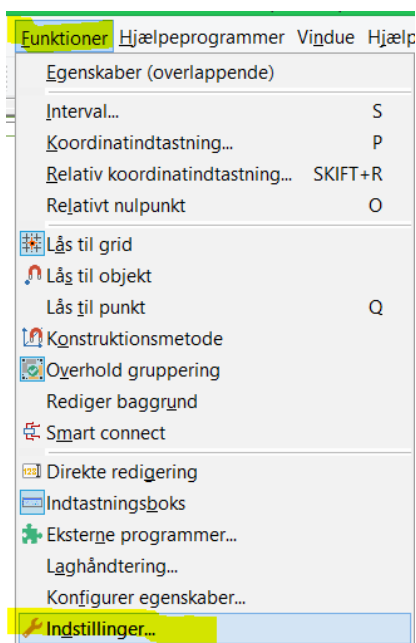


Placing diagram macros

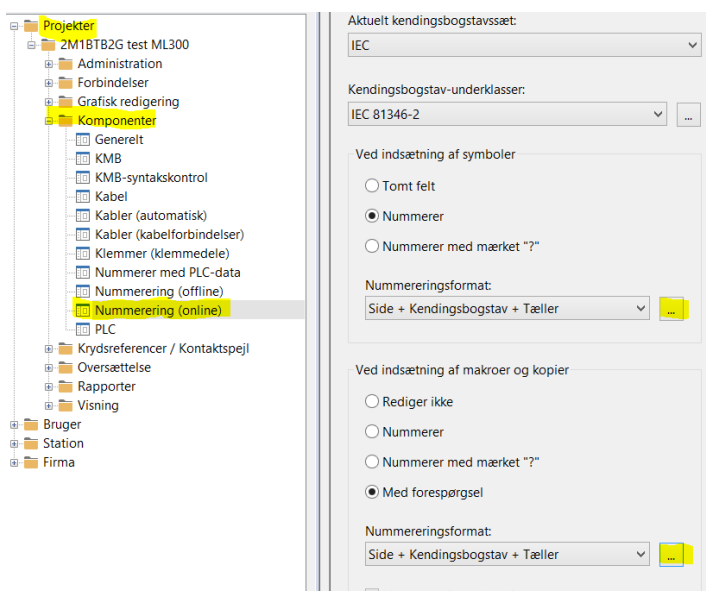
Important note:

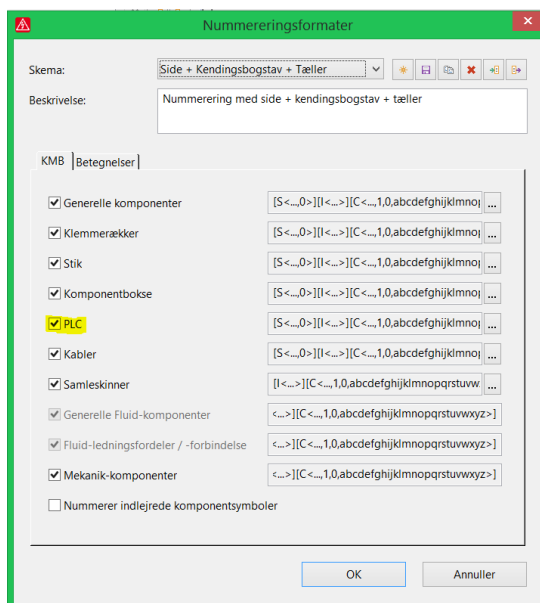
Before placing DEIF controller diagram macros there is some setup to be made to ensure it works smoothly.

Go to Functions->Setup

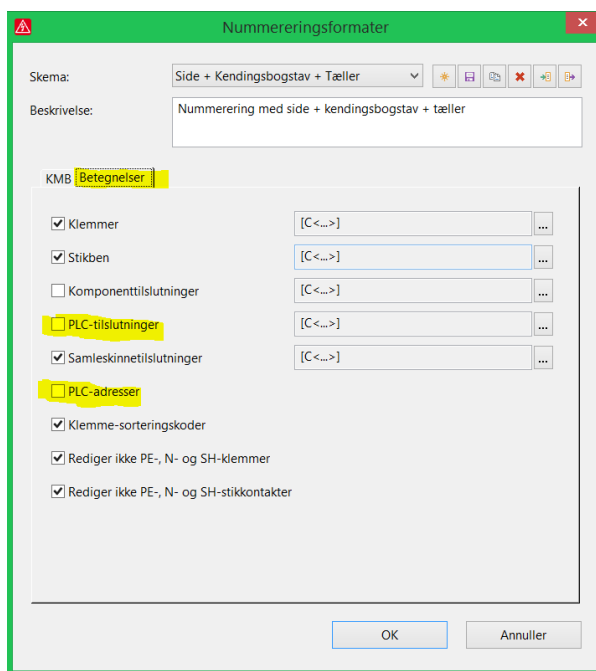


Go to –Projects->'your project'->Components->Numbering (online)



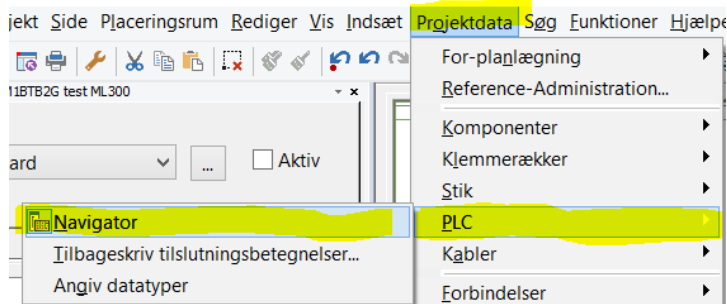


When adding symbols or macros, the numbering of PLC on the KMB tab should be ON

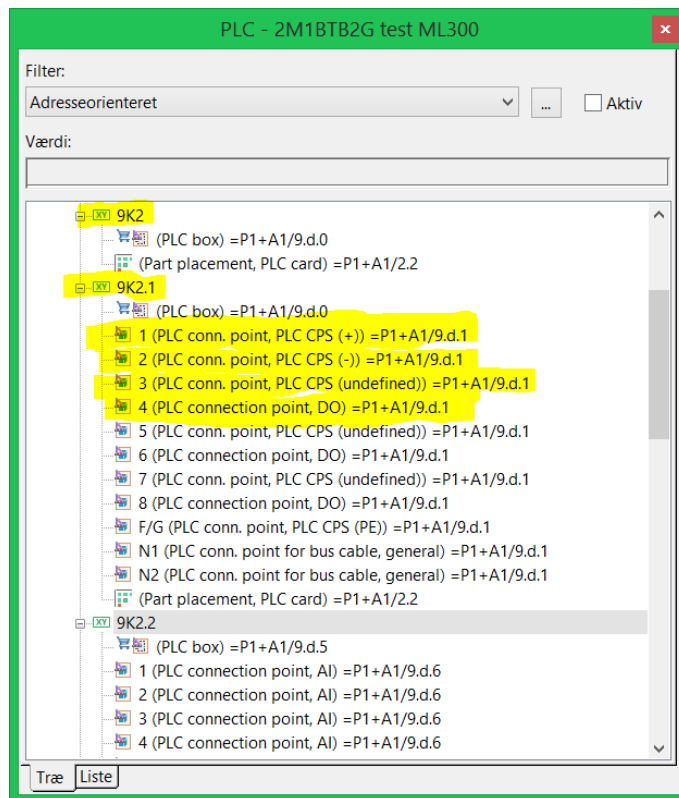


On the designations tab, the PLC-connections and PLC address should be OFF.

As the controller is now defined, the diagram macros are now ready to be placed in the diagram. All cards now exists with their applicable function definitions and related links to diagram macros. To get to them the PLC navigator is opened.



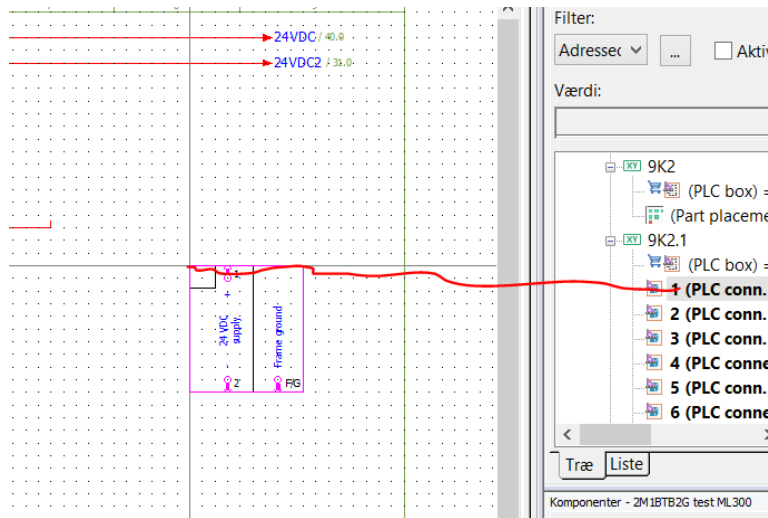
In the PLC navigator the cards as well as all terminals on the cards are now existing. The cross-references here are to the overview pages where they exists now.



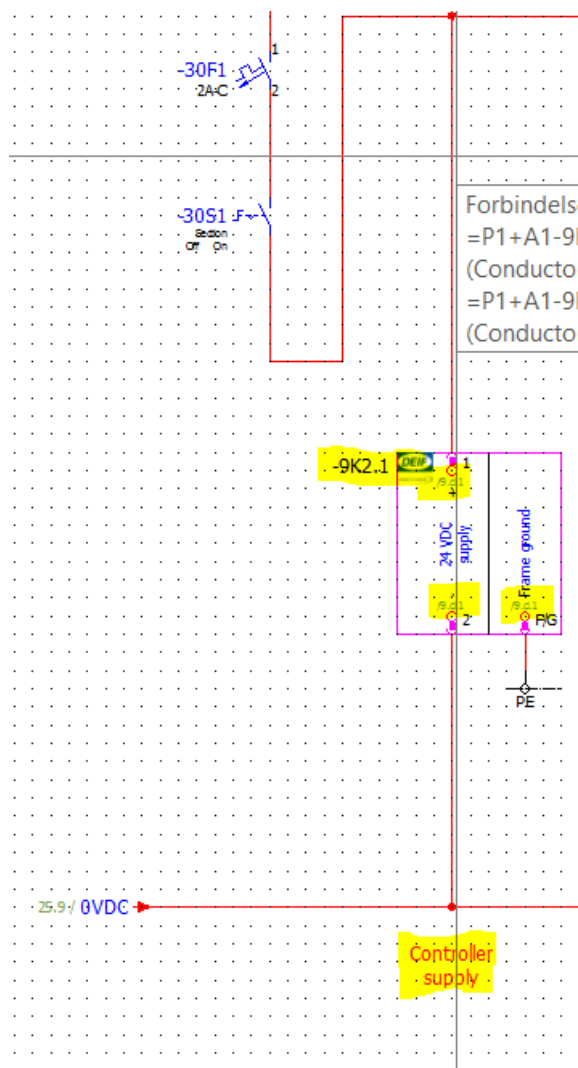
The rack (-9K2) does not have any terminals.

The first card (-9K2.1), a PCM3.1 does have a power supply on terminal 1 and 2 and the status relay on terminal 3 and 4.

1. When placing the diagram macro, click and hold the left mousebutton over the terminal in the PLC-navigator and drag into the diagram. After releasing the mouse button the macro can now be placed freely in the diagram.

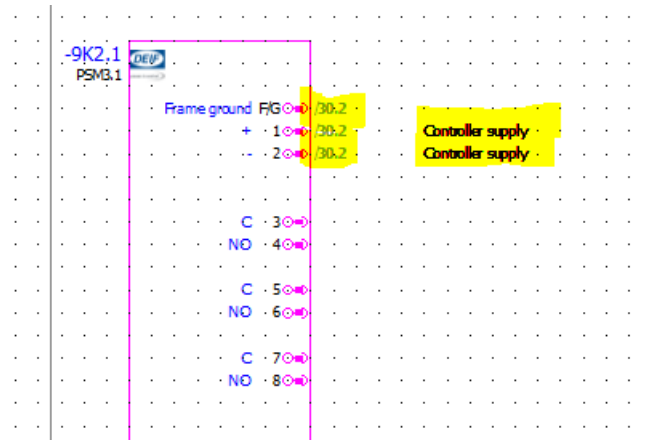


The macro is here placed in the right path

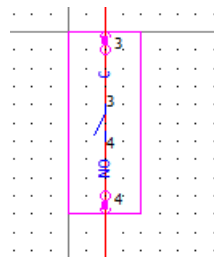


Note the designation, the cross-references are now ready. Below the terminals 1 and 2 a function text is placed.

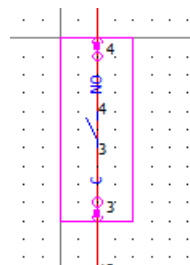
On the overview page the cross-references is now already in place, and the function text in the same path as the terminals are linked to them.



- The next macro to place is the status relay function on terminal 3 and 4. Drag the terminal 3 or 4 into the diagram



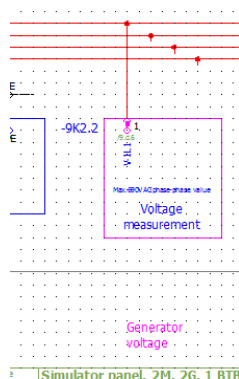
By using the tab, another variant of the macro can be called. This one with terminal 4 above and terminal 3 below.



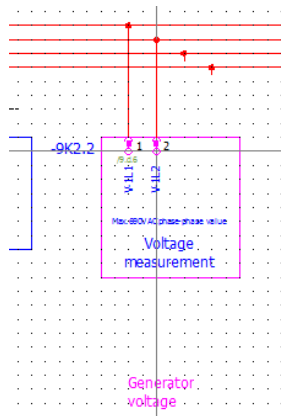
This method is applicable for a number of diagram macros, namely relays and othe inputs and outputs.

- When placing the measurement inputs on the ACM card, each measurement value is placed seperately. The first terminal holds the PLC-box though.

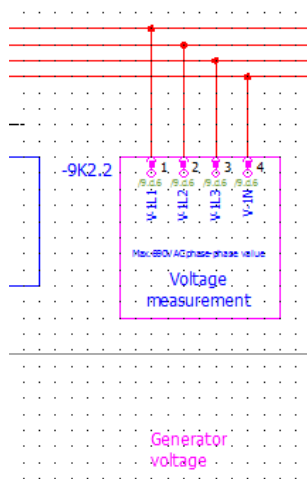
First terminal is placed with the box



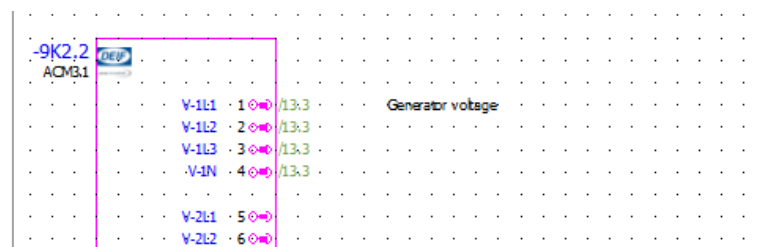
Second terminal is placed



All terminals are now placed



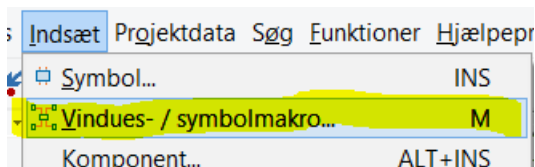
And the crossreferences and function text on the overview page is in place



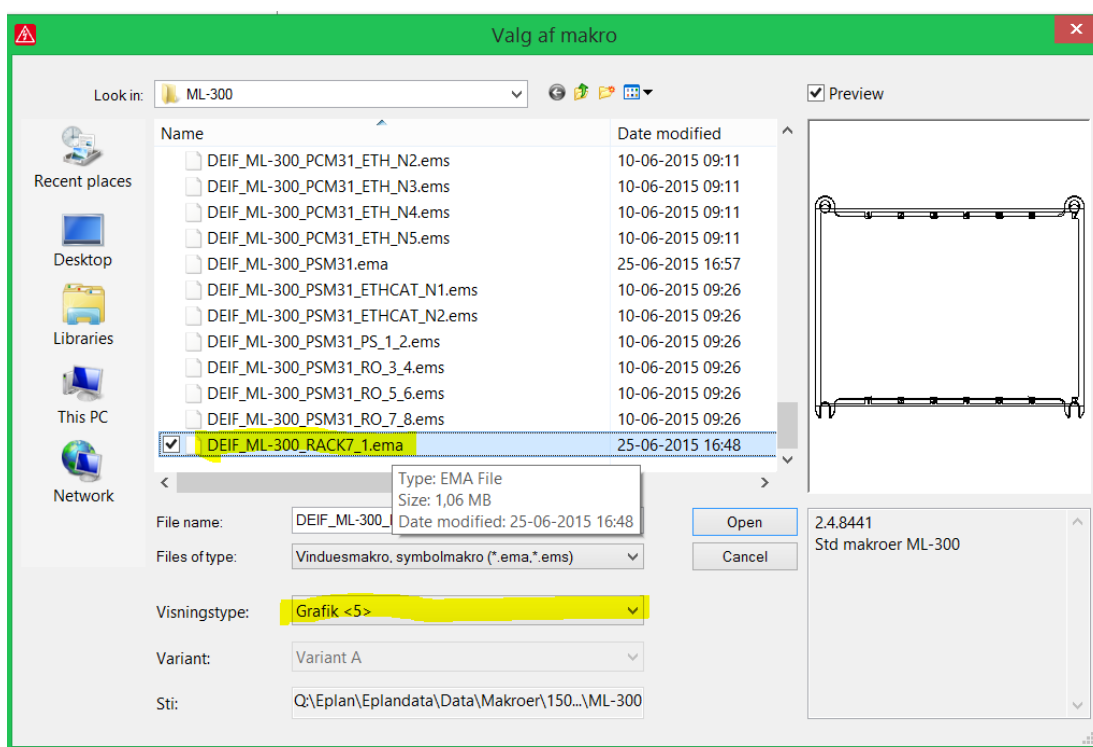
Placing graphical macros

If an exact graphical overview of the controller is needed it is possible to build by using the graphical macros. They are built on a graphical page with the grid set to 1 mm and the scale 1:1.

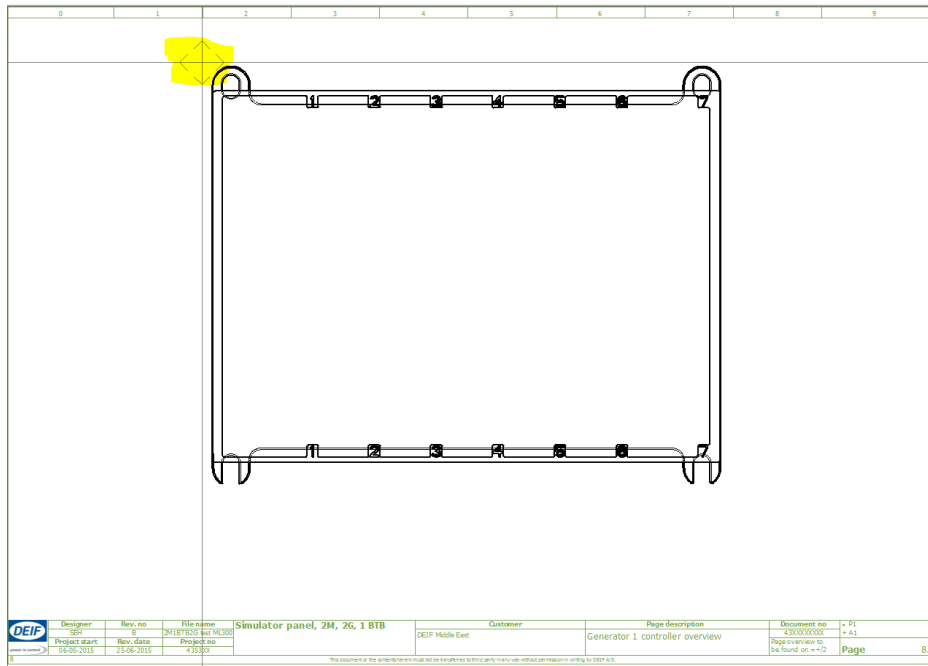
1. Create a graphical page with grid 1 mm and scale 1:1.
2. Insert a macro



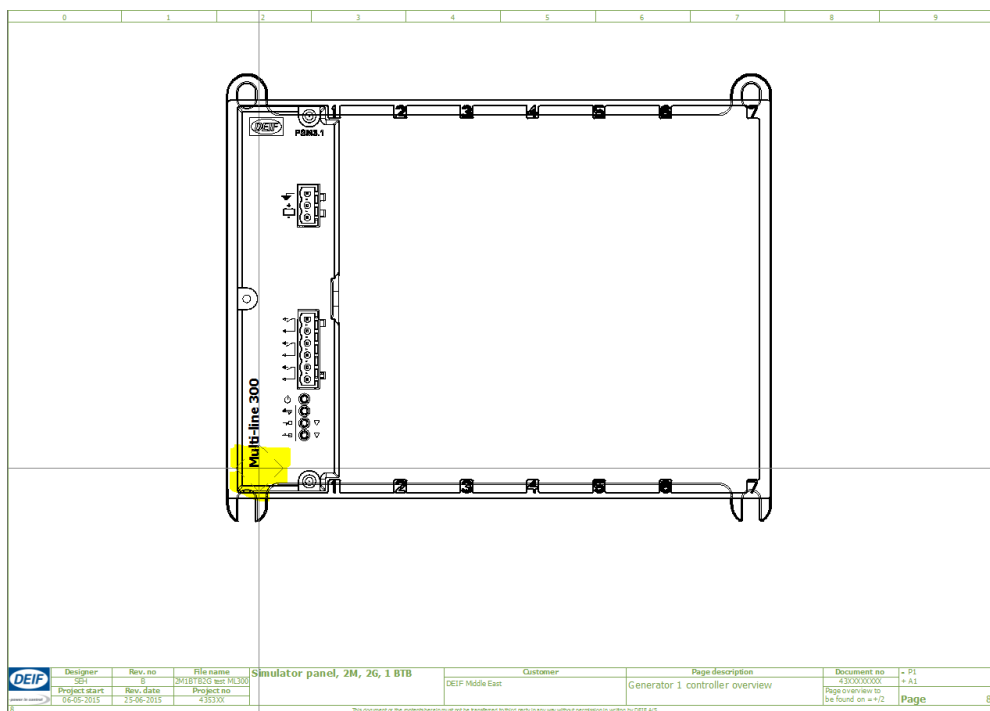
3. Find the Rack macro, ensure it is set to Graphics and Open



- Place the macro by pressing X and Y fixing it in a certain position on the page

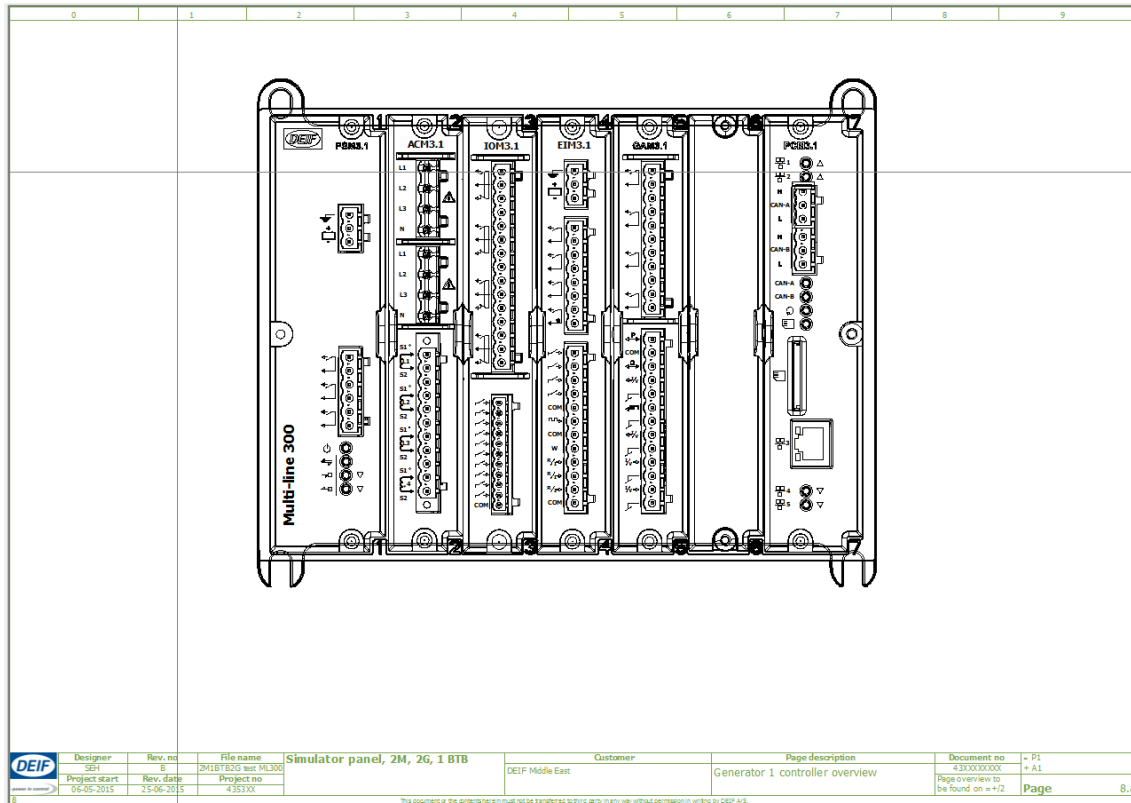


- Insert the next macro, the PSM3.1 card in the same way. By pressing X and Y this is placed in the first slot.





- Continue to fill the rack with cards and blind plates as configured. Some cards need to be fixed on the Y-axis only as they need to be moved sideways in the slots.

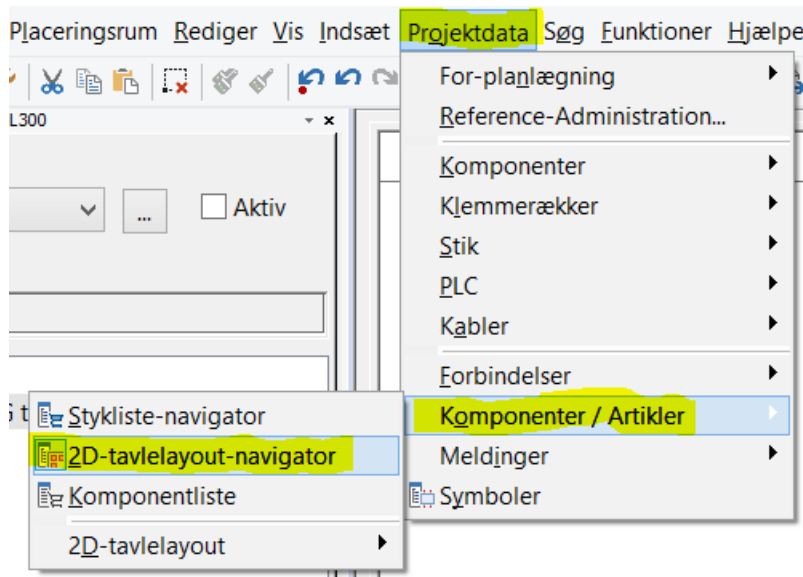


Inserting panel layout 2D macros

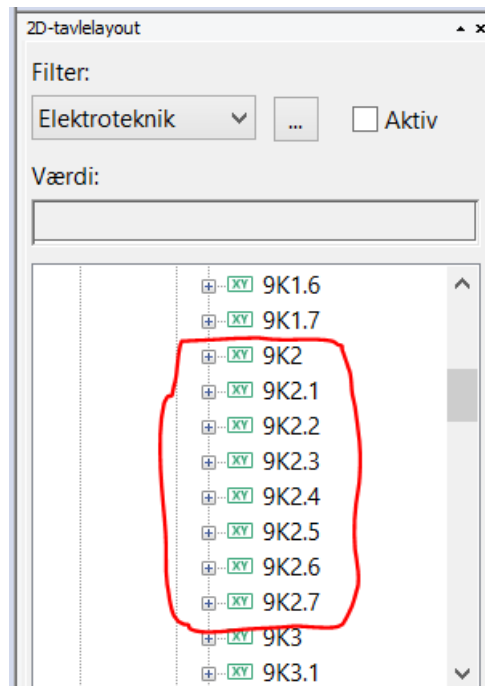
When inserting panel layout macros, it needs to be done on a page type 'Panel Layout' with a defined 'mounting plate' box representing the mounting plate.
In this example I have a page set to scale 1:5, typical for a big panel. I also defined a mounting plate box.

Note* Variant B of the panel layout macros for rack and display unit holds the cut-out/drilling template.

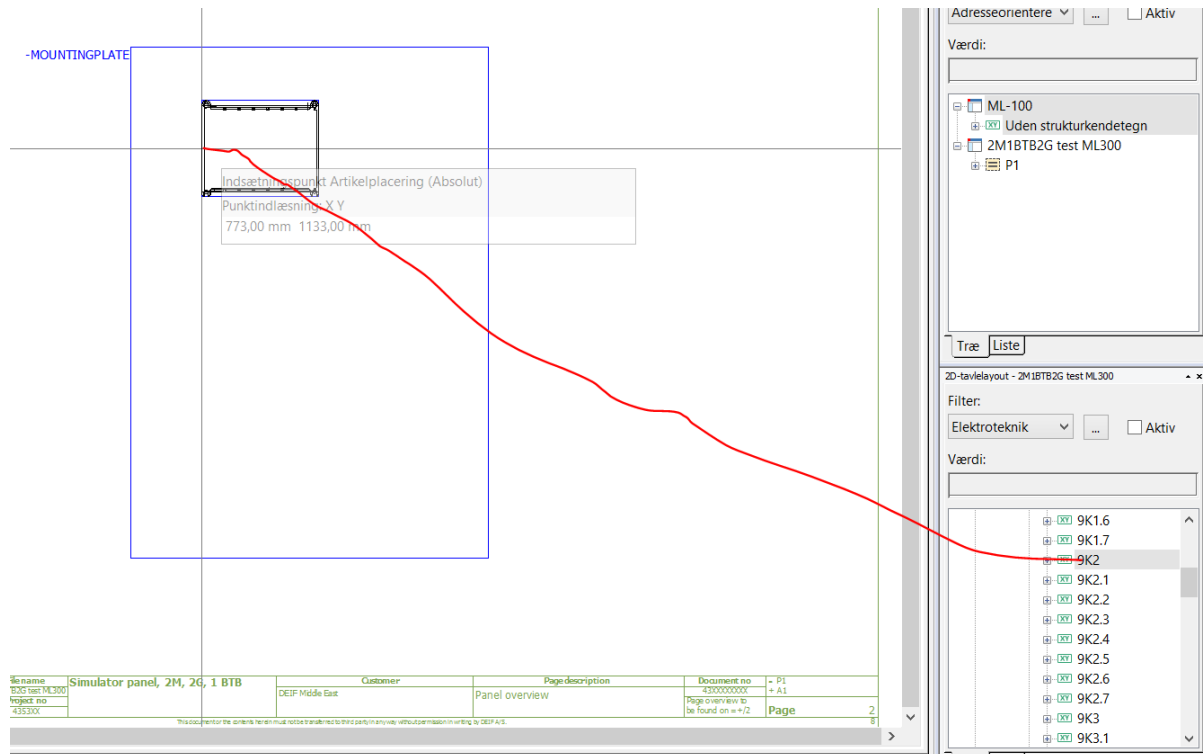
1. Open the 2D panel layout navigator by Project data -> Components/articles -> 2D-panel layout-navigator



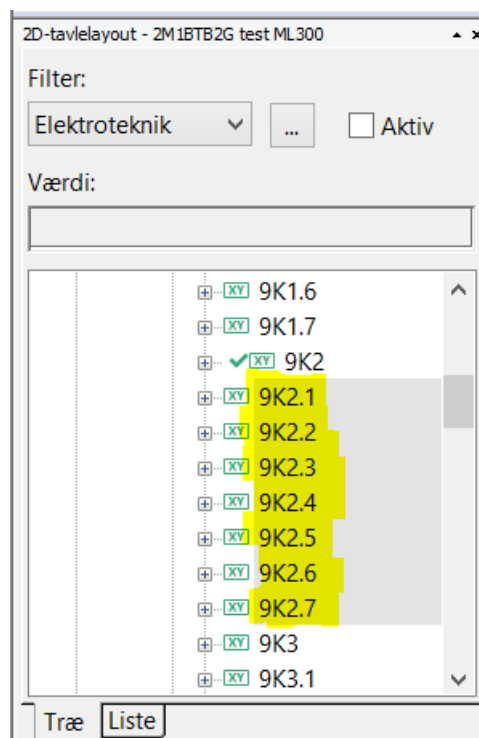
2. Here the ML-300 controller from before can be found



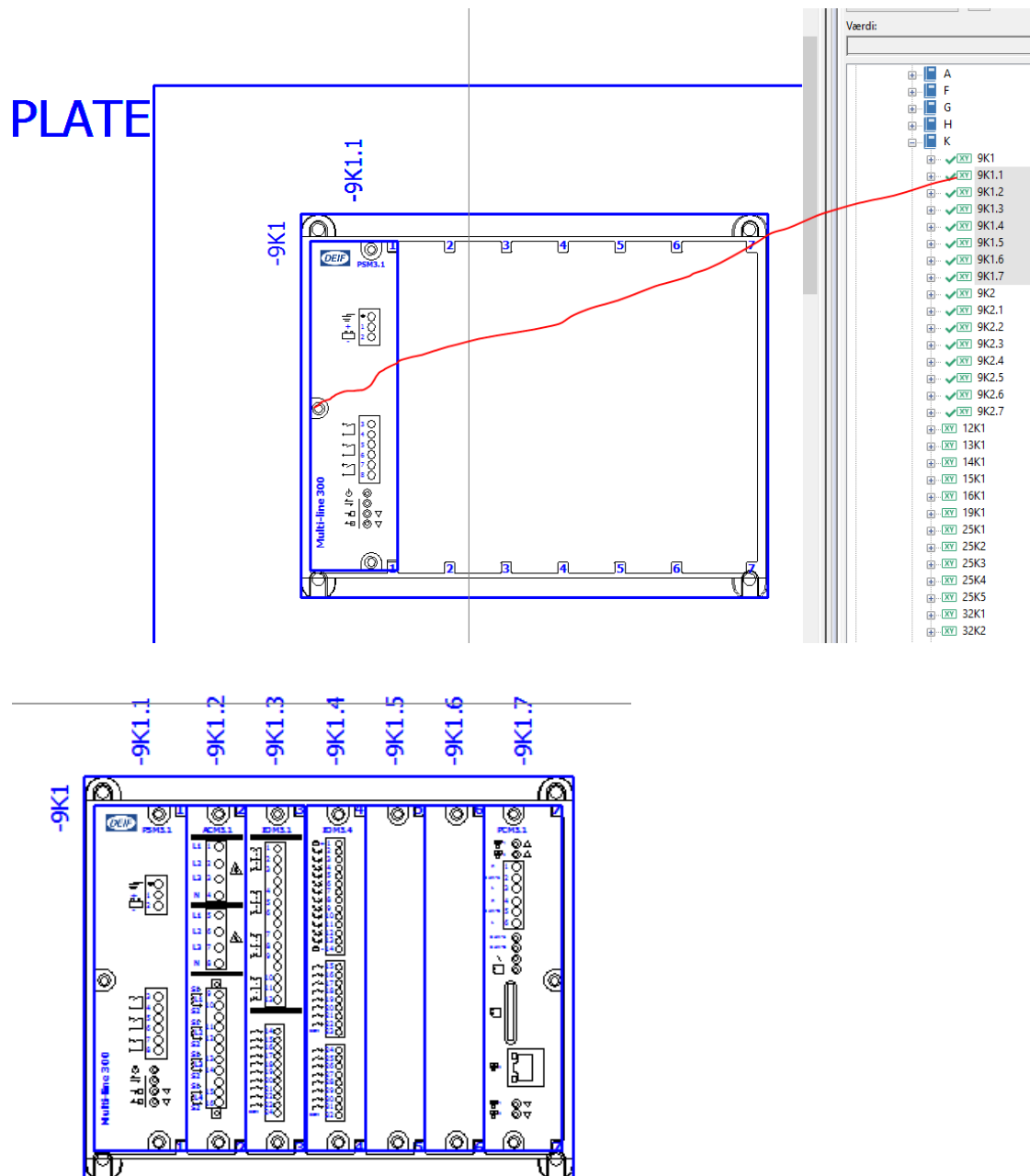
- Find the rack (here it is -9K2), click and hold the left mouse button on it and drag it onto the mounting plate.



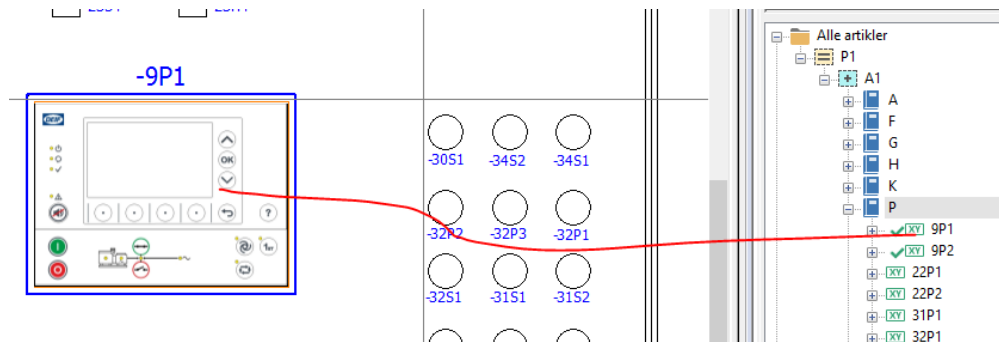
- Mark all the cards in the rack.



5. Drag them into the rack. The first card will now be ready to place. Place it in the first slot and press 'Enter'. The next card is then ready press 'Enter' until all 7 cards has been placed.



6. Displays can be placed in a similar fashion.



Before placing the macro it is possible to toggle the front folio to the right type by pressing TAB. Eplan is not showing the different folios, but the sequence is as follows:

PPM-display:

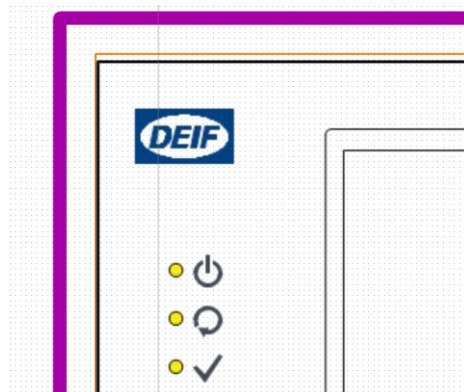
DG -> EDG -> Shaft/shore -> Bus Tie ->

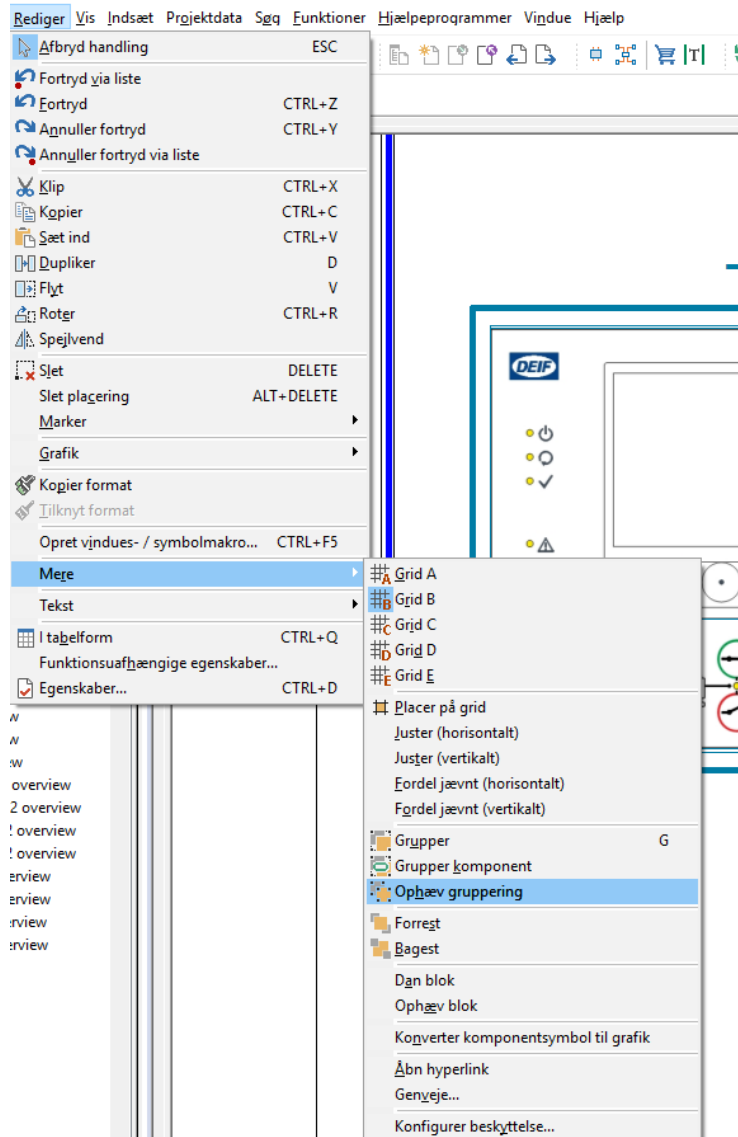
PPU-display:

DG_GB control -> GB control -> GB indication -> Blank ->

Door cut-out

The thin brown line represents the door cut-out. After placing the display it is possible to ungroup the macro and delete the remaining parts for the cut-out to be dimensioned or exported to the workshop.





The cut-out is placed in layer EPLAN672

