

TUTORIAL

PanelBuilder

PanelBuilder is a module for PC|SCHEMATIC Automation from version 14.
Developed by PC|SCHEMATIC A/S.

INTRODUCTION

This booklet contains descriptions of the following:

- Installing the module
- My first project
- How to edit the Automation print template
- The database

PanelBuilder is a module for documenting small switchboards and panels according to requirements in EN61439-1 and 3 concerning power dissipation calculation and more.

The module has the following functions:

- Easy and intuitive user interface
- Drag'n Drop placement of components in a tree structure
- Select components by function, manufacturer, amps-size and number of phases
- Function labels on outgoers
- Online phase distribution
- Online overview of phase distribution and load
- Power dissipation calculation with selectable ambient temperature
- Automatic placement of components in the panel
- More panels in the same project
- Single-line diagrams of the total project
- Export to Eurolink.

The module will work with PC|SCHEMATIC Automation 14 and later versions.

The database that comes with the module includes components from

- ABB
- AEG
- F&G
- GE Redline
- HAGER
- Legrand
- Lauritz Knudsen
- EATON (Moeller)
- Schupa
- Siemens
- Schneider

CONTENTS

INTRODUCTION	3
OPEN PANELBUILDER	8
NEW PROJECT	8
OPEN PROJECT.....	8
LIMITATIONS IN THE DEMO-VERSION.....	8
THE COMPONENTS TAB	9
CHANGE A COMPONENT	11
MOVE A COMPONENT	11
DELETE A COMPONENT.....	11
FUNCTION ICONS (LABELS)	11
COMPONENTS WITH ATTACHED MODULES.....	11
RESELECT ATTACHED MODULE.....	11
MORE ABOUT COMPONENTS	12
HOW TO SELECT A COMPONENT	12
OTHER COMPONENTS	13
ONLINE OVERVIEWS	14
LOAD	14
NUMBER OF MODULES IN A BRANCH.....	14
PHASE DISTRIBUTION	15
COMPONENTS FUNCTION LIST.....	16
SHOW NAMES.....	16
THE PANEL TAB	17
SELECT A PANEL.....	17
PANEL NAME AND REFERENCE DESIGNATIONS.....	17
PLACE COMPONENTS IN THE PANEL	18
THE LAYOUT TAB	19
THE SLD (SINGLE LINE DIAGRAM) TAB	20
THE POWER DISSIPATION TAB.....	21
AMBIENT TEMPERATURE.....	21
OPERATING CURRENT FOR PANELS.....	22
TOTAL POWER DISSIPATION AND LOSS IN INTERNAL WIRES.....	22
THE CALCULATION	22
THE TECHNICAL DATA TAB	23
THE EXPORT TAB.....	24
EXPORT TO AUTOMATION	24
OTHER EXPORTS	25
SAVE THE PROJECT	25
THE TEMPLATE.....	29
IF YOU WANT TO EDIT THE TEMPLATE.....	29
IF YOU WANT TO MAKE YOUR OWN TEMPLATE	30
SYMBOLS IN THE TEMPLATE.....	32
DECLARATION OF CONFORMITY AND OTHER DATA SYMBOLS.....	32
DRAWING HEADERS	32
SETTINGS MENU	35
DATABASE PATH	35
UPDATING THE DATABASE.....	35
LOAD DEFAULT SETUP.....	35
INDEX.....	36



MY FIRST PROJECT

In this chapter you can see how to make a project with the PanelBuilder.

You will also find a thorough review of the individual tabs and the functions included in those.

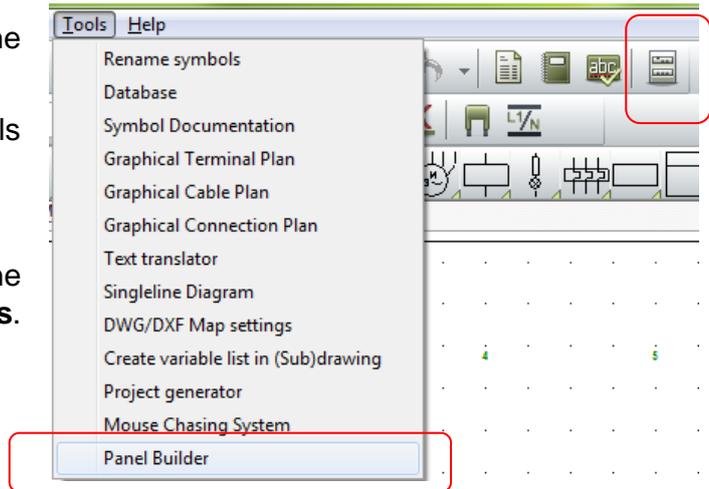
OPEN PANELBUILDER

Start the module by clicking the button in the upper tool bar.

You can also find the module in the Tools menu.

If the menu was not installed on your machine you can install it through **Files => Modules**. Find PanelBuilder and press Install.

Then you can find it in the Tools menu.



NEW PROJECT

To make a new project, select **Files => New**. You must do this here, and then follow the descriptions to make your own first project.

OPEN PROJECT

To open a project, select **Files => Open...**

PanelBuilder projects have the *.PBP extension. This booklet illustrates the DemoUk.PBP project that you can open and work with. If you make changes you can save the project using a new name.

Limitations in the demo-version

If you open Automation in demo mode, you can place a maximum of six components in the PanelBuilder distribution tree.

All other functions are as in the full version, which is without limitations on the number of panel components.

Please notice

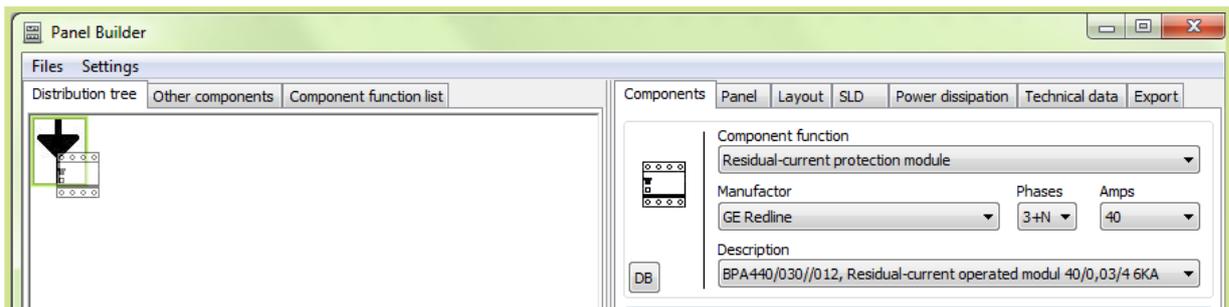
Any change of data must be made in the PanelBuilder module in order to make sure that it can be included in the various calculations. PC|SCHEMATIC Automation is only used to print the project.

THE COMPONENTS TAB

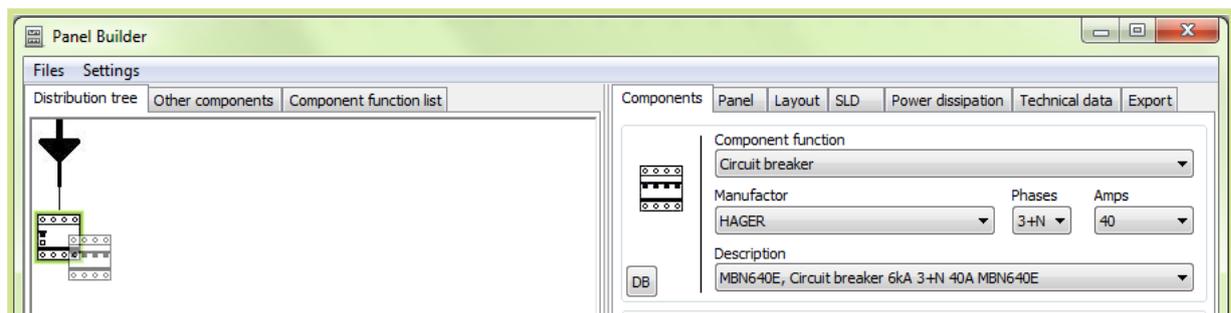
When you open the module you get a two-parts window.

You can now place your components in the distribution tree – the tree occurs when you place the components:

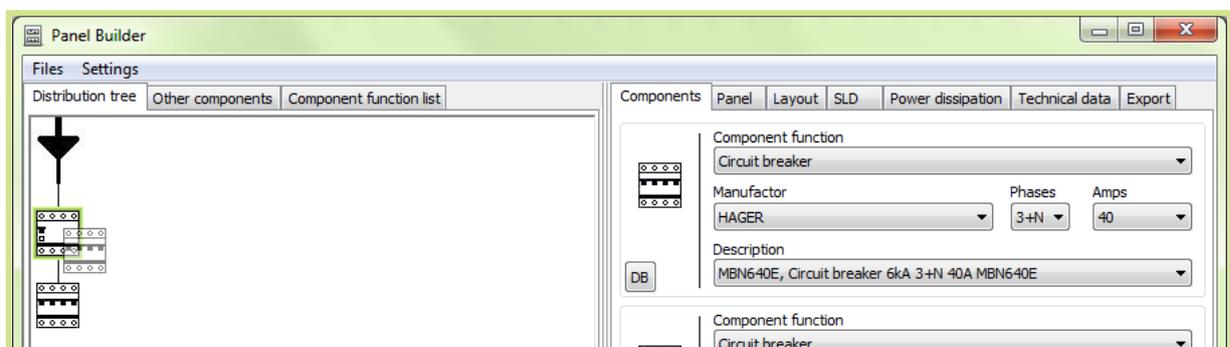
- Start by clicking the icon for the residual current protection module. By means of the built-in filters you can make your way to the shown module. However, the important issue here is, that it must be with 3+N phases.
- Hold down the mouse button, and drag the icon into the left part of the window, in the way that it lands on top of the arrow. The arrow illustrates the panel input. Let go of the symbol, when the arrow is marked.



- Now select a circuit breaker, also with 3+N phase.
- Hold down the mouse button as you drag it into the window and place it on top of the residual current protection module, when it is marked.

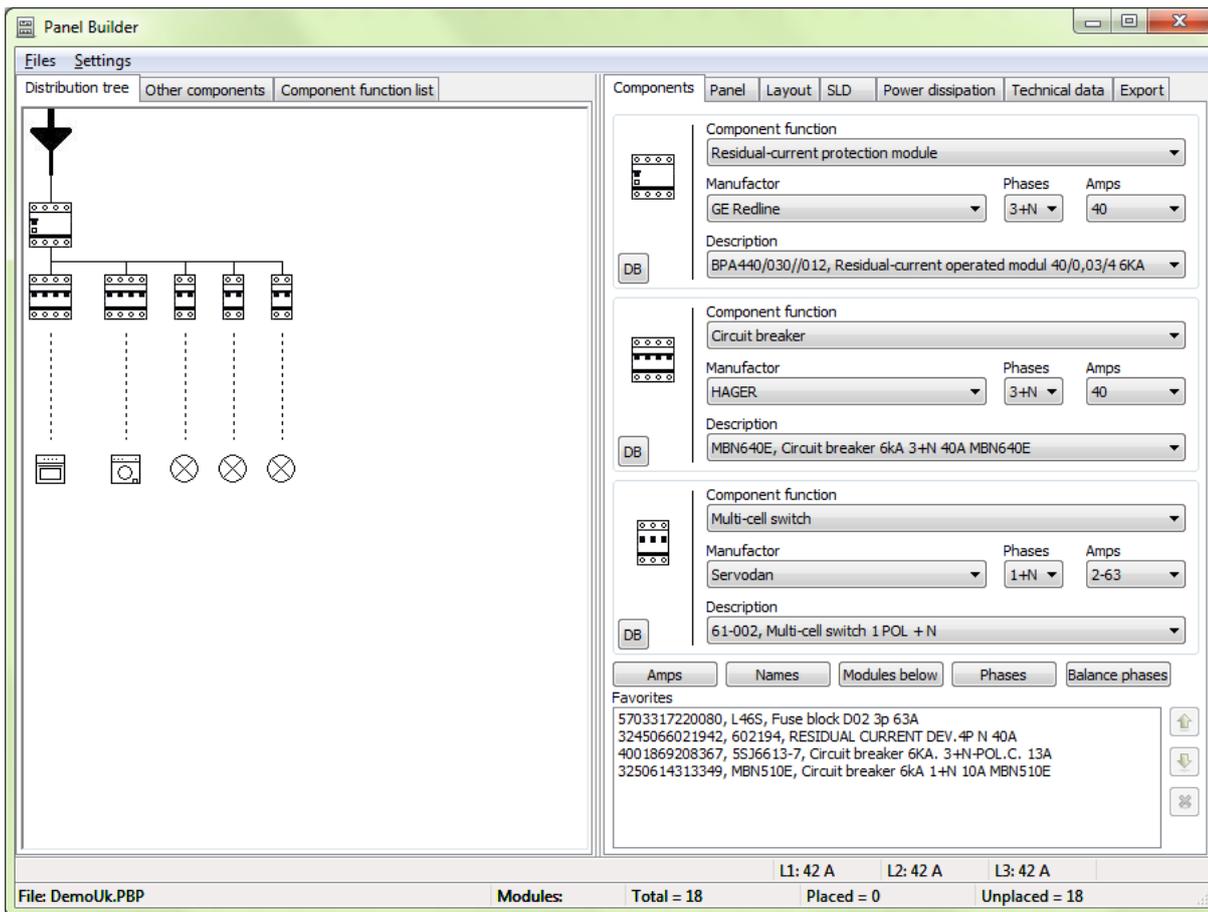


- Select another circuit breaker, also of the 3+N type.
- Place it in the same way, on top of the residual current protection module.



- Continue by placing three circuit breakers of the 1+N type in the same way.

This is what the project looks like:



The right side of the window contains tabs that correspond with the work procedures that you go through when making the project. Whenever you open one of the tabs you can see the distribution tree on the left side.

On the left side you have tabs for the distribution tree itself, other components – without load – that are placed in the panel and a component function list.

You can resize the window to make it fit better with your screen, and you can move the divider.

Below you can read more about the module's functions, among them the possibilities to change calculation data for specific components.

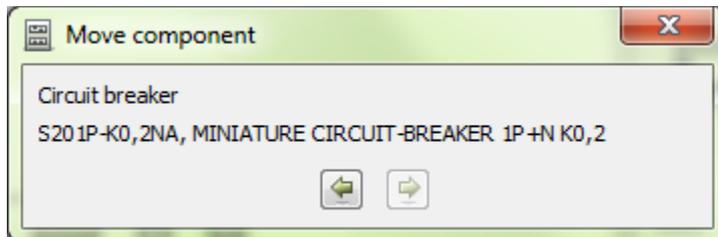
Change a component

If you want to change a component with another, place the new symbol on top of the old one while you press the ctrl-button.

Move a component

Move a component by selecting **Move component** in the rightclick menu.

Component that are below the selected one in the tree-structure are moved as well.



Delete a component

Select **Delete** in the rightclick menu if you want to delete a component. When you delete a component all component below it in the tree-structure are also deleted.

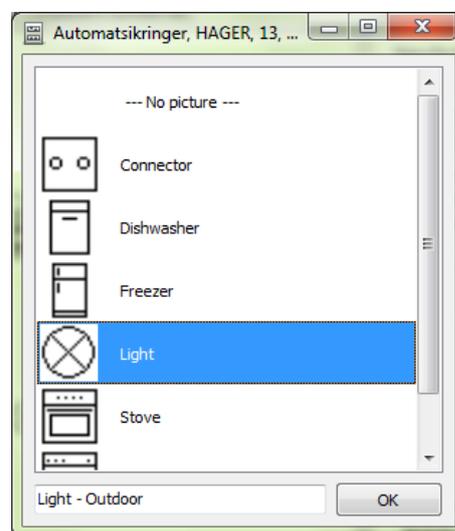
Function icons (labels)

You can add function icons or labels on the lower component in each branch.

Select Add/Edit function in the rightclick menu to open the dialog. Icons are deleted by selecting "No picture...".

Select an icon and when you double-click its default text is seen at the bottom of the window. You can edit the text. The text will be included in the single-line diagram when you export to Automation. If you place your mouse on top of a component the text can be seen in a pop-up window.

You can make your own icons, see how in the Symbols chapter.



COMPONENTS WITH ATTACHED MODULES

A component with attached modules is for instance a fuse block that contains a fuse.

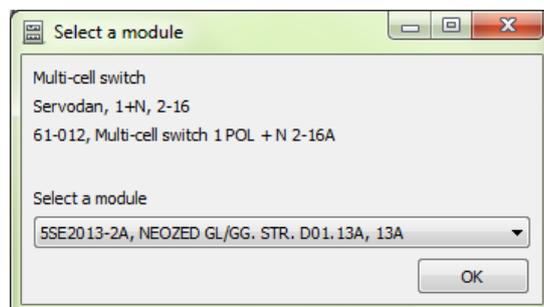
When you place the fuse block you will get a list with available fuses for the block.

Reselect attached module

It is possible to select another attached module through the rightclick menu.

You can reselect at any time.

The new value will be used in the following calculations.



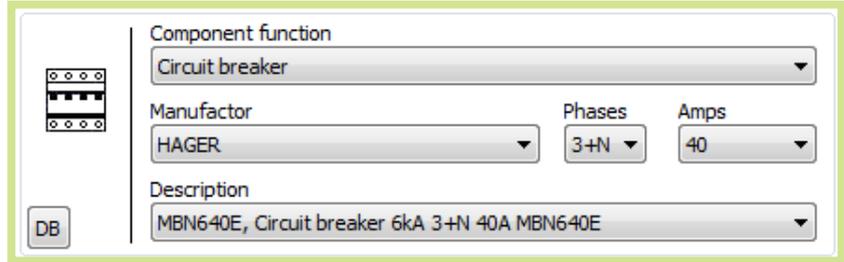
MORE ABOUT COMPONENTS

You have different options for selecting components and for making settings for the selected components in the project. Read more below.

How to select a component

In the Components tab you have three identical windows from which you can select components.

In every window you see a small icon at the left side which corresponds to the size and partly to the look of the selected component type.



At the top of the window you select from Component Function. You can select between:

- Circuit breaker
- Residual current protection modules
- Multicell switches (circuit breakers with fuses)
- Fuse blocks

When you have selected a component function, you can search through the components with the selected function.

You can filter by manufacturer, number of phases and Amp size. You make the final selection based on descriptions.

Search in the database

If you want to select a component from its EAN-number or a type designation, click the DB-button to open the database window.

Favorites

If you have a small range of components it can be convenient to save these in the Favorites box.

Start by finding the component as described above. Then you drag the icon into the boxes and you can see some of its data. You can also drag an icon into the box directly from the distribution tree.

Hint texts

If you place the mouse on any of the placed components, you will see a pop-up window with various data for the component.

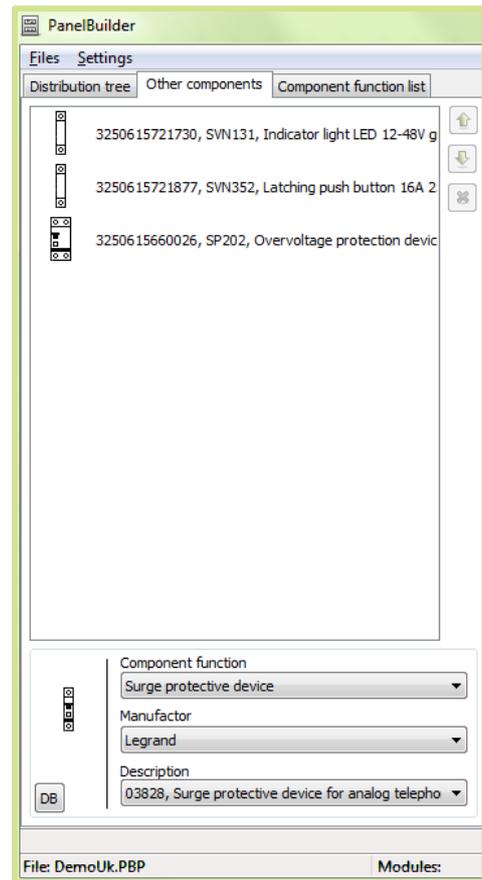
OTHER COMPONENTS

Apart from the components in the distribution tree, you can also select components like push-buttons, indicator lamps and surge protection devices, all components that are not included in the distribution tree – as they are without load – but which are placed in the panel.

You can find these components on the “Other components” tab.

When you select this tab, the Components tab on the right side goes blank, as you select components for this part from the box at the bottom of the “Other components” tab.

If you want to change the order of components or you want to delete a component from the list, you will find buttons for this at the right side of the window.

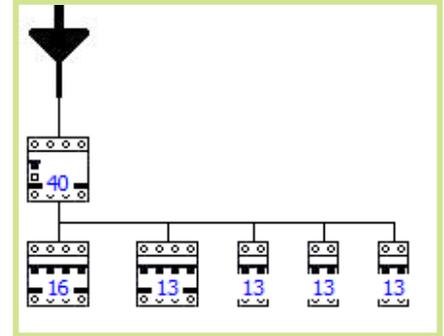


ONLINE OVERVIEWS

PanelBuilder has different ways of showing online what is placed in the project and how load and phases are distributed in the project.

Load

Press the button **Amps** to see the load on each component. The button must be activated to show the information.



Change load

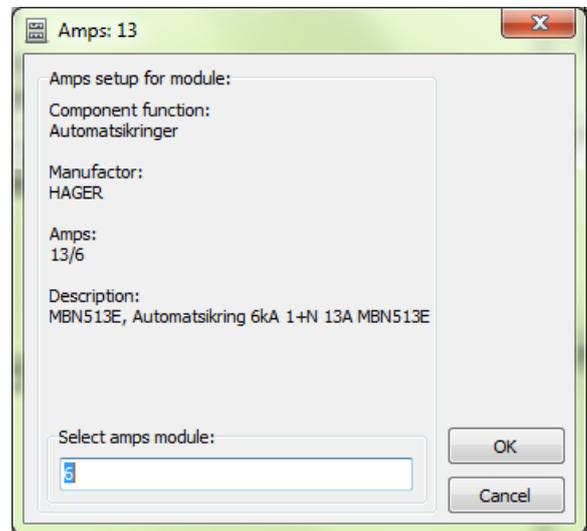
It can be necessary to change the load for a component manually.

Select **Amps Setup** in the rightclick menu to get this dialog.

The new value will be used in the subsequent calculations.

If you have changed the value and later press the **Amps** button both values will be shown.

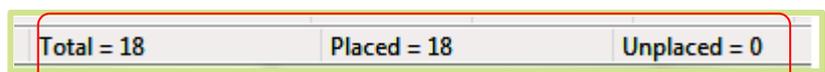
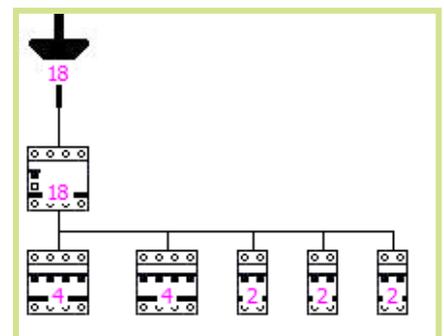
You can change the value at any time. The new value will be used in the calculations. In all lists you will see both values.



Number of modules in a branch

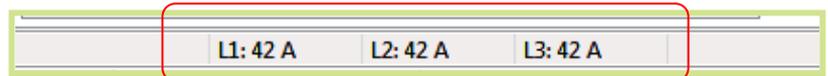
Press the button **Modules below** to see the number of modules on each branch. The button must be activated to show the information.

At the very bottom of the program window you can see the total amount of modules in the project.



Phase distribution

The program has an online phase load distribution.



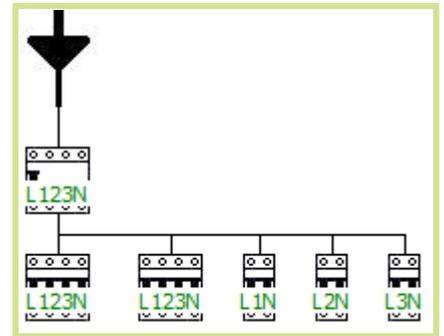
The resulting distribution can be seen at the bottom of the window.

Manual phase distribution

If you open an existing project with an un-even distribution, you can change the phase-loads by pressing the button **Balance phases**.

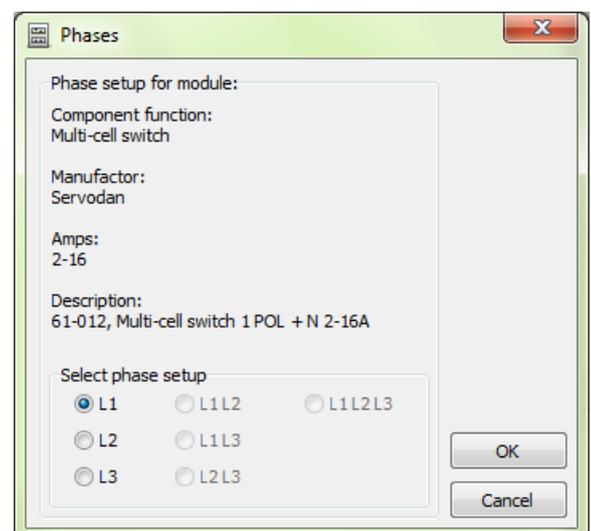
Show phases

Press the **Phases** button to see which components are connected to which phases. The button must be activated to show the information.



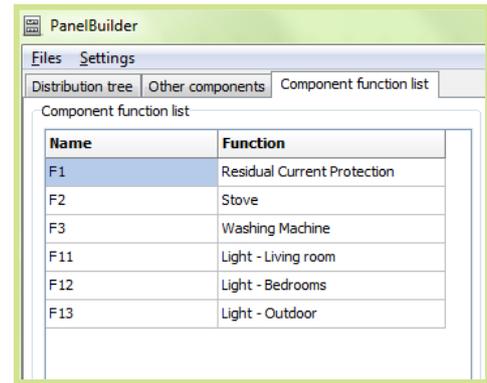
Phase setup on individual components

You can make a manual phase setup for individual components through the rightclick menu. Selected phases for a component will – of course – be inherited for all components below.



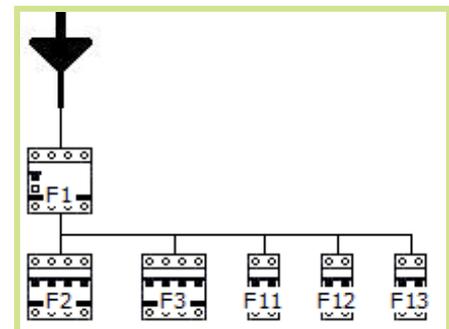
COMPONENTS FUNCTION LIST

The third tab on the left side makes it possible to edit component names and function texts in a table form and not in the distribution tree. To do that, you need to doubleclick the name and/or function. The names can be exported to Automation.



Show names

Press the **Names** button to see which components have which names. The button must be activated to show the information.



THE PANEL TAB

When you have finished your distribution tree for the project you must place the components in the panel(s).

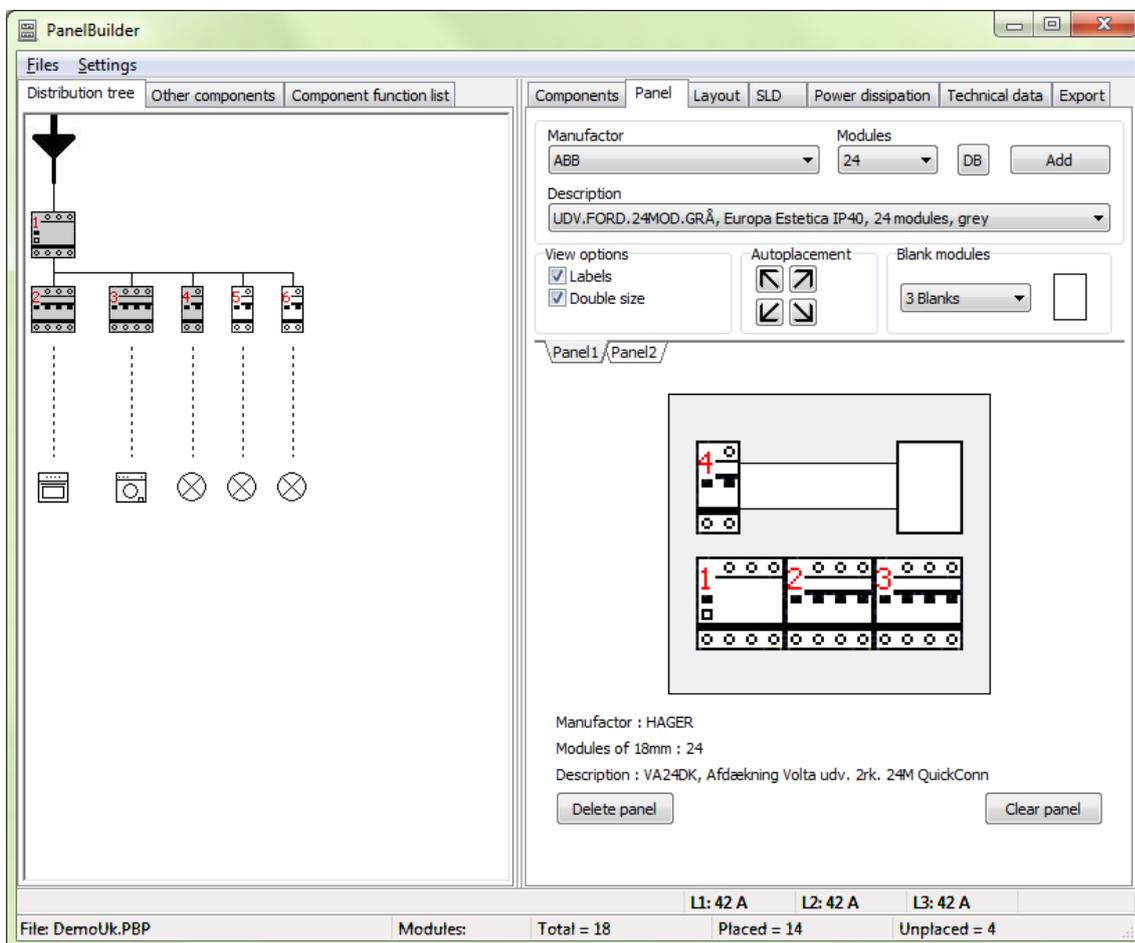
SELECT A PANEL

Start by selecting a panel – the needed amount of modules can be seen in the status line at the bottom of the window.

Select the panel in a way similar to selecting other components, i.e. filter your way through manufacturer, number of modules, description or go directly to the database to select from type or article number. When you have found the right panel, press the **Add** button to see it.

If you need more than one panel, select the next one(s) in the same way. When you press the **Add** button, you get a tab for each panel.

Use the tabs to see each panel.



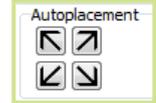
Panel name and reference designations

Default panel names are Panel1, Panel2 etc.. You can rename the panels by doubleclicking the name and type in the new panel name e.g. A1, A2 etc.. The panel names can later be used as reference designations in the project. Don't write any component prefix (-) as this is done by the program when you export to Automation.

Place components in the panel

Components can be placed automatically from one of the corners. They will be placed according to their position in the distribution tree.

If you want to control the placement of particular components, you can manually drag a component from the distribution tree into the panel, just as you can place empty modules. The rest of the components can then be placed automatically.

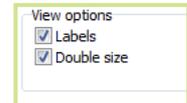


If you put a component in a wrong position, simply delete a single component – through the rightclick menu – or delete all components from the panel by pressing the **Clear panel** button.

As you place the components in the panel they become grey in the distribution tree.

Show components

You can select to see labels on each component in the tree as well as in the panel. You can show the panel in double size.

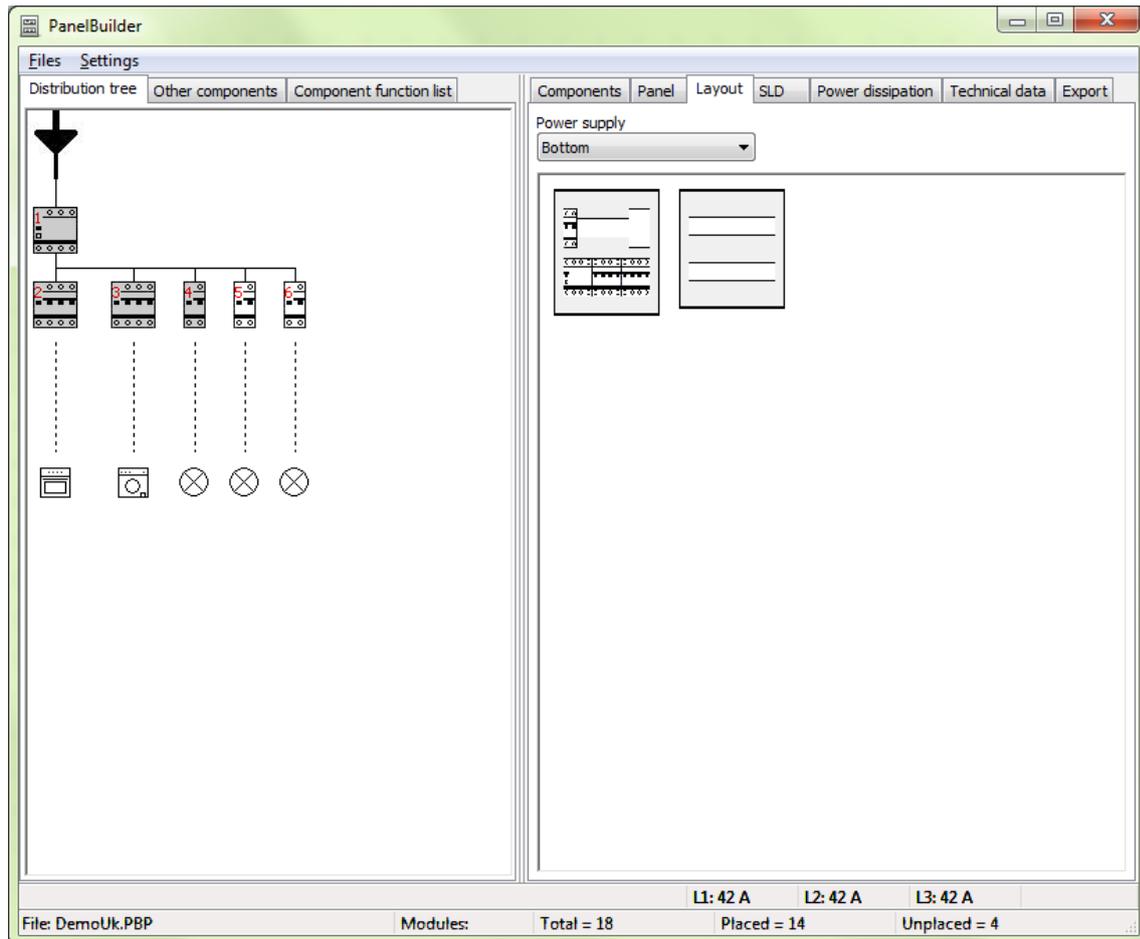


THE LAYOUT TAB

At the Layout tab you can see how the panels are placed on the panel layout drawing that you export to Automation.

What you see here is similar to Show Print Preview. You can drag the panels to another location on the sheet.

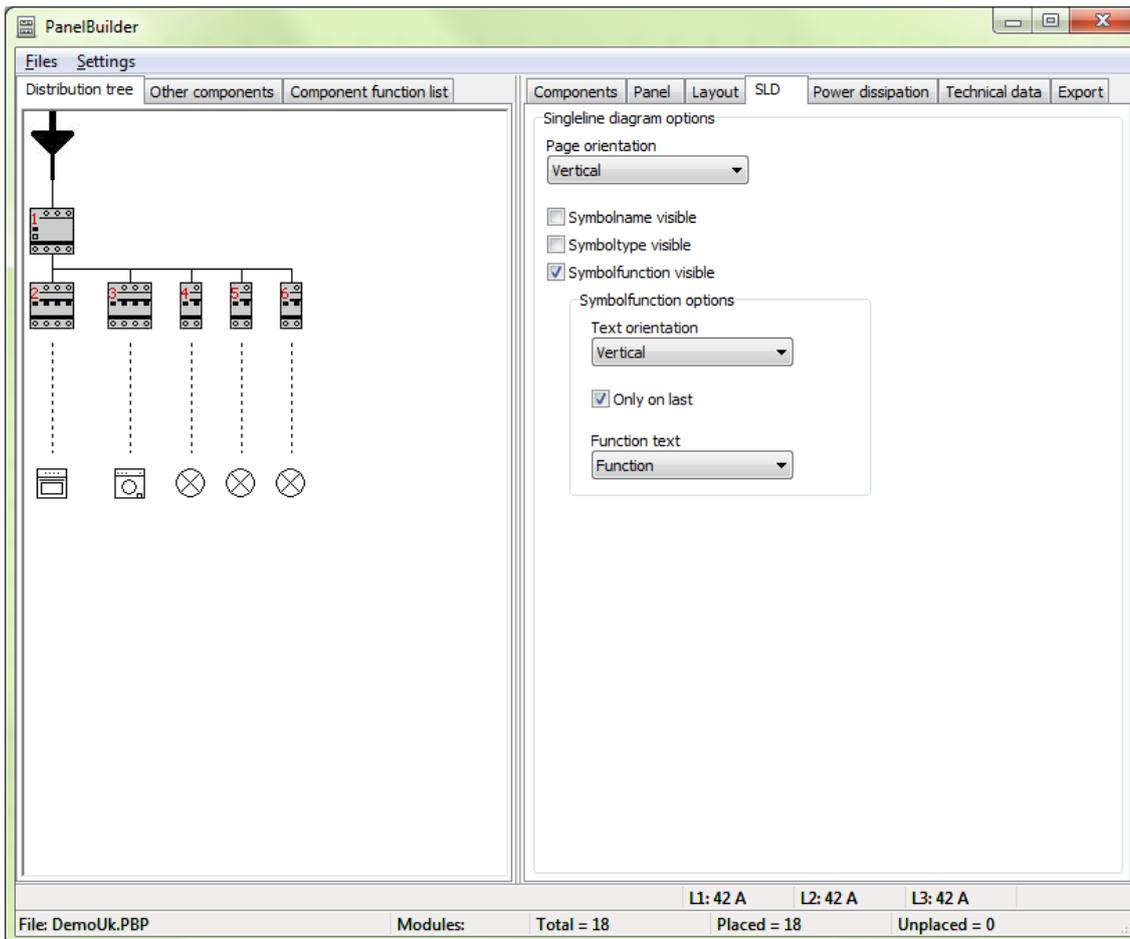
If the panels are located as seen here – horizontally – the program will export the layout page to the template's horizontal page and vice versa.



THE SLD (SINGLE LINE DIAGRAM) TAB

You can export a single line diagram of the project to Automation. On the SLD tab you can make various settings for the single line diagram:

- Print to vertical or horizontal page.
- Visible symbol name, type and function
 - The symbol function can be shown vertically or horizontally and only on last component (recommended)
 - Function text can be label text, description from database or both.



THE POWER DISSIPATION TAB

You can make a power dissipation calculation when all components are placed in the panel. You can make different settings that will influence your calculation, however, the methods are according to the requirements laid down in EN 61439-1 and 3.

The screenshot shows the PanelBuilder software interface with the 'Power dissipation' tab selected. The 'Ambient temperature' is set to 20 °C and 'Operating current for panel(s)' is set to 'Calculated'. The calculated internal temperature is 36,09 °C, and the panel calculation is OK. The operating current is 36,95 A and the simultaneity factor (SF) is 0,95. The power dissipation inside panels is 27,39 W, with 15% dissipation for internal wires (4,11 W), resulting in a total power dissipation of 31,5 W.

Comp.	Type	Description	In	Pn	Int	L1	L2
	Input		38,79			38,79	38,79
1	602194	RESIDUAL CURRENT I	40	12	36,95	38,79	38,79
2	G103NC16	Circuit breaker C 16A	16	7,71	14,78	14,78	14,78
3	5S36613-7	Circuit breaker 6KA. 3	13	5,6	12,01	12,01	12,01
4	MBN513E	Circuit breaker 6kA 1-	13	4	12,01	12,01	0
5	MBN513E	Circuit breaker 6kA 1-	13	4	12,01	0	12,01
6	MBN513E	Circuit breaker 6kA 1-	13/6	4	5,54	0	0

At the bottom of the window, the status bar shows: L1: 42 A, L2: 42 A, L3: 35 A. Modules: Total = 18, Placed = 18, Unplaced = 0.

Ambient temperature

You can select different ambient temperatures for your panels. The ambient temperature will affect your operating temperature for the panel. You get a warning if the operating temperature for panel components will increase above the max operating temperature.

The screenshot shows the PanelBuilder software interface with the 'Power dissipation' tab selected. The 'Ambient temperature' is set to 50 °C and 'Operating current for panel(s)' is set to 'Calculated'. The calculated internal temperature is 57,97 °C, which is above the maximum operating temperature of 50 °C for component 602194. A warning message is displayed: 'Warning: Calculated internal temperature: (50 + 7,97) = 57,97 °C. Panel calculation not OK, Type = '602194' has a max. temperature of 50 °C'. The operating current is 26 A and the simultaneity factor (SF) is 0,95.

Operating current for panels

When you select "Calculated" the program calculates with full load, based on the data in the project: I.e. the load is based on the settings you have made, if you have made manual amp.setup the manually selected value will be applied in the calculation etc.. That also means that the simultaneity factor in the project will be as large as possible.

If you select making the calculation with a fixed operating current, it is another way of selecting a (lower) simultaneity factor.

Total power dissipation and loss in internal wires

In a panel you have power dissipation in the panel components and in the internal wires. The sum of these is the total power dissipation of the panel.

You can adjust the dissipation for internal wires, which will have the following effects for the calculation: When you raise the dissipation in the wires, it affects the operating temperature in the panel, meaning that you cannot drag the same load from your components, which will cause the heat dissipation in the components to fall. That is the reason that you see the heat dissipation for component lower as you raise the internal wires' dissipation.

The power dissipation in internal wires is normally selected to be 30%.

The calculation

The result of the calculation is shown as total panel data – calculated operating temperature, operating current and simultaneity factor, total heat dissipation, dissipation in internal wires and finally a list of all components and their calculation data.

You can have the extended information as shown below with data for each phase or a table with total loads. This can be selected either on the tab or on the Export tab.

POWER DISSIPATION
 Operating current for panel(s): Calculated - Panel(s) calculated at: 40,76 °C
 Calculated internal temperature: (20 + 20,27) = 40,27 °C - Ambient temperature: 20 °C
 Operating current: 34,62 A - Simultaneity factor (SF): 0,95
 Power dissipation inside panels:
 For components: 26,95 W - 15% dissipation for internal wires: 4,04 W
 Total power dissipation: 30,99 W

Comp.	Type	Description	In	Pn	Int	L1	L2	L3	L0	I _{max}	P _v	P _v x SF2	Pconst	I _{max} x SF
	Input		36,35			36,35	36,35	30,29	6,06					34,62
F1	602194	RESIDUAL CURRENT DEV.4P N 40A	40	12	34,62	36,35	36,35	30,29	6,06	36,35	9,91	8,99	0	34,62
F2	G103NC16	Circuit breaker C 16A 3P+N 10KA	16	7,71	13,85	13,85	13,85	13,85	0	13,85	5,78	5,24	0	13,19
F3	5SJ6613-7	Circuit breaker 6KA. 3+N-POL.C. 13A	13	5,6	11,25	11,25	11,25	11,25	0	11,25	4,19	3,8	0	10,71
F11	MBN513E	Circuit breaker 6KA 1+N 13A MBN513E	13	4	11,25	11,25	0	0	11,25	11,25	3	2,72	0	10,71
F12	MBN513E	Circuit breaker 6KA 1+N 13A MBN513E	13	4	11,25	0	11,25	0	11,25	11,25	3	2,72	0	10,71
F13	MBN513E	Circuit breaker 6KA 1+N 13A MBN513E	13/6	4	5,19	0	0	5,19	5,19	5,19	0,64	0,58	0	4,94
F7	SPN115	Overvoltage protection device 15kA type II 1P											0	0
F8	SPN115	Overvoltage protection device 15kA type II 1P											0	0
S1	SVN352	Latching push button 16A 250V 1sl+1br.			0,8								0,8	0,73
S2	SVN352	Latching push button 16A 250V 1sl+1br.			0,8								0,8	0,73
P1	SVN131	Indicator light LED 12-48V green			0,8								0,8	0,73
P2	SVN131	Indicator light LED 12-48V green			0,8								0,8	0,73

The table shown above will be included in the export to Automation.

Apart from data in this table, various data will be included in the Declaration of Conformity, the technical data page and the CE-mark.

THE TECHNICAL DATA TAB

In this tab you can type your basic data for each project, i.e. customer name and project number. In your later Automation project you will find these basic data in title blocks in drawing headers, the Declaration of Conformity and other symbols depending on your template.

You can also edit technical data, i.e. product data, panel data, operating data and short circuit data. Beware that some the values are derived from the power dissipation calculation you just made.

Other data – e.g. manufacturer name – can be edited in the Settings mneu. Read more about this in the section Load default setup page 35.

The screenshot shows the Panel Builder software interface. The left pane displays a distribution tree diagram with a main busbar and five outgoing lines. The right pane contains various data entry fields categorized into Project data, Product data, Panel data, Operating data, and Short circuit data. The status bar at the bottom shows 'Total = 18' modules and 'Placed = 18'.

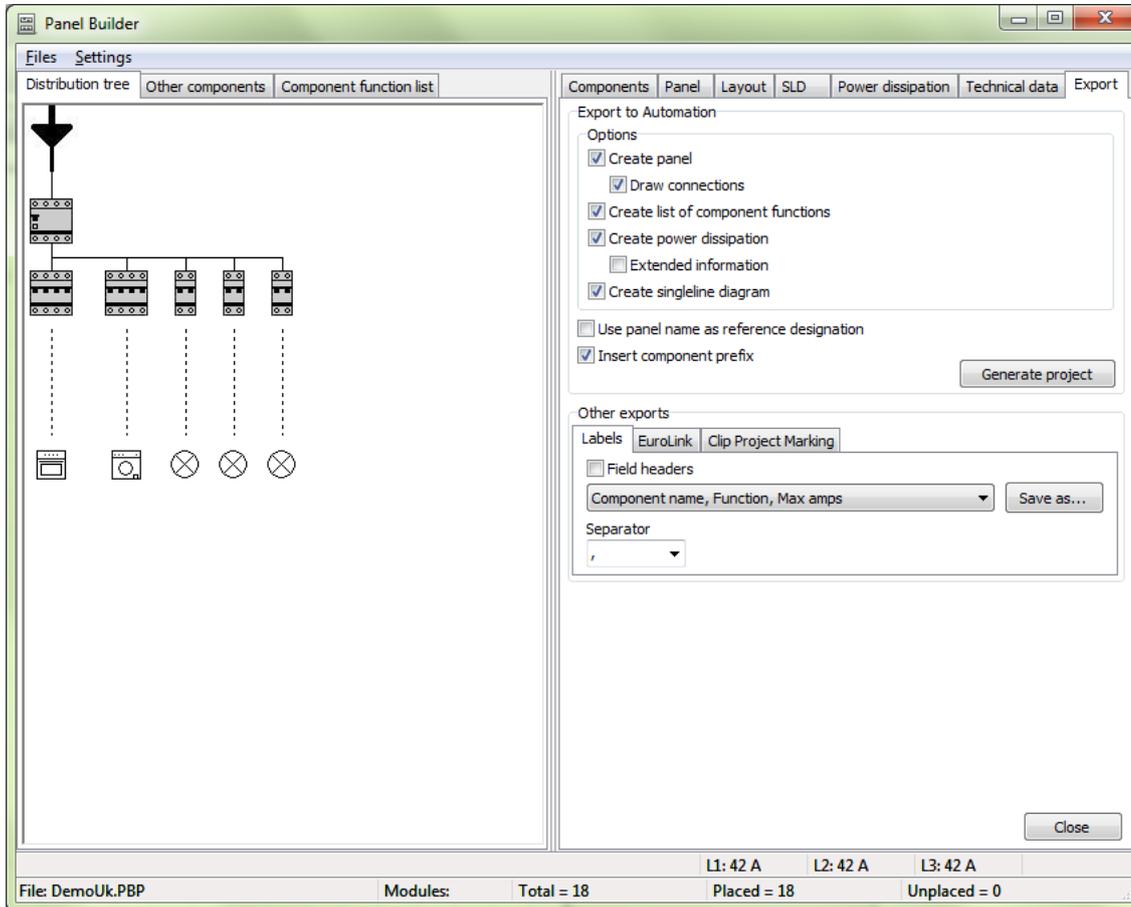
Category	Field	Value
Project data	Customer	Ms Bucket
	Project no.:	PO2343
	Constructor	EC
	Approved by:	EC
	Date:	July 2012
Product data	Id	VA24-2343
	Manufacturer	Elliott Cable
	Address	230 Cable Road
	Postal code and city	1224 Voltage City
	Phone	+1 23 456 789
	Norm	EN 61439-3
Panel data	Internal division	Form 1
	Pollution class	2
	EMC - environment	1
Operating data	Insulation withstand voltage (V)	400
	Network system	TT/TN-S
	Operating voltage	3 x 230/400 V, 50Hz
	Rated peak withstand current (kA)	30
Short circuit data	Protection against indirect contact	
	Panel	Total insulation
	Outgoers	Automatic disconnection of the supply
	Rated impulse withstand voltage (kV)	6
	Max. short circuit current (kA)	6
	Min. short circuit current (kA)	0.15
	Max. main breaker current (A)	35

File: DemoUk.PBP Modules: Total = 18 L1: 42 A L2: 42 A L3: 42 A
Placed = 18 Unplaced = 0

THE EXPORT TAB

On the last tab you make your export settings, to Automation where you can continue working with the project or simply print it.

You can also export label texts and possibly data to other programs.



Export to Automation

Choose between exporting the panel or include its power dissipation calculation and/or single line diagram.

You can use panel names as reference designations and you can insert component prefix (-) in front of component names. If you want to have prefixes on panel names they must be included in the name you select for the panel itself, see page 17.

If you changed component name in the Component function list tab, those will be the names in all Automation lists. Read more about this list on page 16.

When you have made your selections, press the **Generate project...** button to export to Automation.

Remember to save the project in the PanelBuilder module, as you can not yet open an Automation project from the PanelBuilder.

Print the project

You can print the project from Automation. To do this, close PanelBuilder and select – in Automation – Files => Print.

Save the project

Remember, that if project changes affect the power dissipation calculation, the changes must be made in the PanelBuilder, as you cannot load an Automation project with the PanelBuilder.

Save the project for later use: **Files => Save**. Files are saved its own *.PBP format.

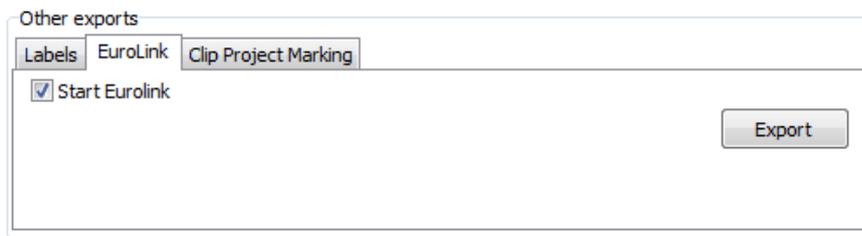
Other exports

Apart from exporting the project to Automation, it is possible to export data to other programs and other equipment, that is test and marking equipment.

Installation tester

EuroLink

If you installed the EuroLink program on your pc, it is possible to export directly to this. EuroLink is software to the Eurotester, which is a Metrel product.



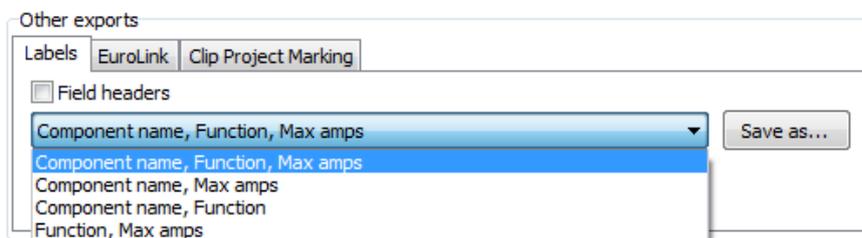
Read more at www.elma.com.

Marking

Labels

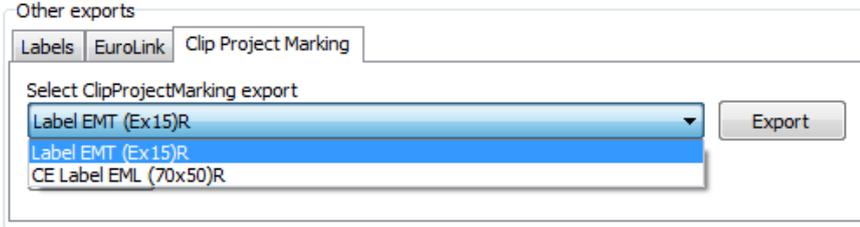
You can export an comma separated file with label texts. You can find a list with predefined formats in the dropdown box.

The comma separated format can be used by most printers for marking equipment.



ClipProjectMarking

If you have installed the ClipProjectMarking program, it is possible to export directly to this. CLIP PROJECT Marking is a software from Phoenix Contact. You can read more at www.phoenixcontact.com and you can also download the program at this address (free download).



The integration between the two programs works this way: the button [Export] starts ClipProjectMarking, imports data to the selected labels and show the labels ready for printing:

	Lights 1.floor 13 Amps	Washingmaschine Basement 16 Amps	Stove Kitchen 16 Amps	Dish washer Kitchen 13 Amps	
--	-------------------------------------	---	------------------------------------	--	--

The CE-label can also be printed with ClipProjectMarking:

Operating voltage: 3 x 230/400 V, 50Hz Operating current (A): 32,55 Max. short circuit current (kA): 6 Max. main breaker current (A): 25	Norm: EN 61439-3 Manufacturer: HAGER Type: VA24DK Degree of protection: IP30
Manufacturer: Elliott Cable 3 Cable Rd Voltage City 1224 +123 456 789	
ID: VA24-2343	

The solution has been tested with ClipProjectMarking 8.2 and the Thermomark Roll printer. If you wish to use another printer or other label types, please contact your local Phoenix Contact office.



THE TEMPLATE

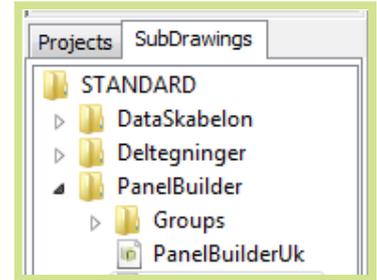
In this chapter you can see how to edit the template, ie how to use your own drawing headers and title blocks.

THE TEMPLATE

The empty project that you print to when exporting to Automation is called The Template.

Find the template in Automation on the Subdrawing tab in the PanelBuilder folder.

If you rightclick on the file, you can open and edit it.



IF YOU WANT TO EDIT THE TEMPLATE

When you change the file, there are a set of rules that must be kept if it is to function in the future. The rules are described below.

You can change the page order, delete page, make your own list setups, change logos titles and drawing headers without problems.

Change drawing header

Go to **Settings => Page data** to select your own drawing header. In the existing template we have used different drawing headers: one for A4 prints, one for A3 prints and various list contents. Each of the headers can be changed throughout the project in one operation.

If you wish to create your own drawing header you can see how to do this in the PC|SCHEMATIC Automation manual.

Change logo

Go to **Settings => Project data** and select your own logo. You can select logo 1 and 2. Remember to make place for logos when you design your own drawing headers.

You can use files with extensions jpg, bmp, png or gif for logos and other pictures.

Change title

Default project title is the PanelBuilder filename (without extension).

Go to **Settings => Project data** to write another title for the project. The project title is placed on the middle of the current front page. You can change this title, delete it or replace it with another text if you wish.

IF YOU WANT TO MAKE YOUR OWN TEMPLATE

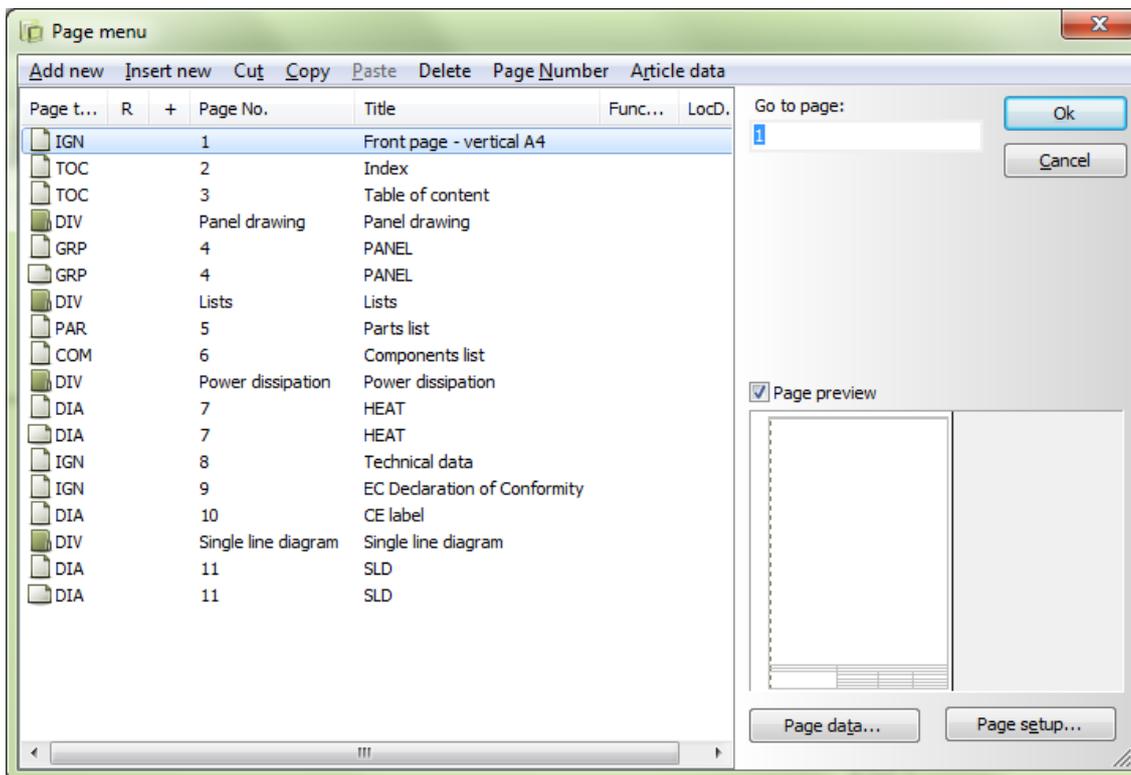
If you open the Page menu you will see the box below, in which you can see which pages are in the template. Here you can see the different page types, directions, numbers and titles. All of which are of importance when you design the template.

A DIA-page is a Diagram page, a GRP is a groundplane or mechanical page, a PAR is a parts list etc.. You can read more about the page types in the Automation manual.

Below, you can read about the rules for the PanelBuilder template, rules that you must obey if you make your own.

Fixed name

The template must be named PanelBuilderUk.PRO. If you want to keep “our” template for reference purposes you can start by renaming it.



As you can see, the template contains more pages with the same page title and number. This is on purpose: when the project is exported to Automation PanelBuilder can select the page setup best suited for the page’s purpose.

Panel layout

When generating the project, PanelBuilder searches for at GRP-page with the title PANEL. If it finds more than one page with this title it selects the page that fits the preview on the Panel tab. The other page is deleted. The page title is overwritten with the value of the PANEL-tab in the PanelBuilder. In English it will be “Panel”. The pagenumber will be as above.

Power dissipation

The program searches for a page with the title HEAT. If it finds more than one page with this title it selects the page that fits the best with the calculation table. The other page is deleted. The page title is overwritten with the value for the Power dissipation tab in the PanelBuilder. In English that will be "Power dissipation". The pagenumber will be as above.

Single line diagram

The program searches for a page with the title SLD. Her ledes efter en side med titlen SLD. It keeps the page you have selected on the SLD tab (vertical or horizontal page). The other page is deleted. The page title is overwritten with the value fo the SLD-tab in PanelBuilder. In English that will be "Single line diagram". The pagenumber will be as above.

CE-label

The program searches for a symbol which name begins with CE_. The CE-label(s) is placed on the page. If the project contains only one panel, the position of the CE-label is unchanged; if the project contains 2-4 panels the label symbol is copied and centred on the page; if the project contains 5 or more panels the labels are placed from the upper left corner and downwards, and more pages are inserted if necessary.

The size of the CE-label that comes with the template, is based on the labels delivered with the panels.

Other technical data and Declaration of Conformity

The other technical data and the Declaration of Conformity are written to symbol data fields in the symbols. There are no requirements to symbol names or page titles as long as the symbols contain the relevant data fields. See the symbols in the included template.

Parts and component lists

Note that data for parts and component lists are not updated with the PanelBuilder database when they are exported to Automation.

If your database contains the components in your project, simply right click and select **Update list** and your lists will be updated with all information.

If your database doesn't contain the components, you need to change database. Do this the following way: Select **Settings => Database**. Now select the relevant database file. The database that came with the module is called PanelBuilder.mdb

List with component functions

If you select to create this list, the program will create a page for it. It will be an empty copy of the page right in front of it, on which two text columns – component names and function descriptions – are listed.

SYMBOLS IN THE TEMPLATE

Declaration of Conformity and other data symbols

The symbols that contain the other technical data for the panel(s) are made as drawing headers or normal symbols. Beware of naming rules as described above.

Read more about symbol design in the PC|SCHEMATIC Automation manual.

Drawing headers

Drawing headers that are used in the template are also symbols. Read more about design of drawing headers, lists and other symbols in the PC|SCHEMATIC Automation manual.



SETTINGS

Read about the various module settings, among them how to update your database

SETTINGS MENU

The menu Settings gives access to updating the database and to loading default values for panel data and standards. You can change the setting in each project as described in the PanelBuilder Quick Start.

DATABASE PATH

Here you can see name and path to your database. More users on the same network can use the same database.

Updating the database

PanelBuilder picks all component data in a database. Keep the database updated to have as many relevant component as possible. Go to **Files => Check for database updates.....** If a newer database version is available you will be informed, and the updated will be automatically installed when you press OK.

PC|SCHEMATIC will keep the database updated. If you need components that are not in the database, please don't hesitate to contact us.

LOAD DEFAULT SETUP

You can edit technical data in each individual project in the Technical data tab. The values that are selected are written to the relevant pages when the project is exported to Automation.

This menu lets you load the default setup values for the module.

Panel Data	Norm	EN 61439-3 (and/or EN 61439+-1)
	Internal division	Form 1
	Pollution class	2
	EMC environment	1
Operating data	Insulation withstand voltage (V)	400
	Network system	Select in the project
	Operating voltage	3 x 230/400 V, 50 Hz
	Rated peak withstand current (kA)	30
Short circuit data	Protection against indirect contact: Panel Outgoers	Total insulation Automatic disconnection of the supply
	Rated impulse withstand voltage (kV)	6
	Max short circuit current (kA)	6
	Min short circuit current (kA)	Type values in the project. Values are obtained from the power distribution company
	Max main breaker current (A)	

Make your own standard project: if you have different projects, ie different earthing principles, save a project with the setting and use it as a standard project. Remember to Save as...

INDEX

- Ambient temperature, 21
- Amps setup, 14
- Attached module, 11
- Brands, 3
- CE-label, 31, 32
- Change component, 11
- Change load, 14
- Change logo, 29
- Component
 - attached module, 11
 - change, 11
 - delete, 11
 - move, 11
 - place in panel, 18
- Component brands, 3
- Component function list, 31
- Component manufacturers, 3
- Components, 12
- Components function list, 16
- Database, 35
 - update, 35
- DB-button, 12
- Declaration of Conformity, 31, 32
- Default setup, 35
- Delete component, 11
- Demo mode, 8
- DemoUk.PBP, 8
- Distribution tree, 9
- Drawing header, 29, 32
- Edit template, 29
- Edit title, 29
- EN 61439, 21
- Eurolink, 24
- Export settings, 24
- Favorites, 12
- File format, 25
- Function icon, 11
- Function labels, 11
- Fuse, 11
- Fuse size, 11
- Install the module, 8
- Internal wires, 22
- Limitations, 8
- Load, 14
 - change, 14
 - view, 14
- Logo, 29
- Move component, 11
- Names
 - view, 16
- Number of modules, 14
- Online overview, 14
- Operating current, 22
- Operating temperature, 21
- Other components, 13
- Page menu, 30
- Panel, 17
 - select, 17
- Panel components, 17
- Panel layout, 19, 30
- PanelBuilderUk.PRO, 30
- PBP, 25
- PBP extension, 8
- Phase load distribution, 15
 - automatic, 15
 - manual, 15
 - online, 15
 - view, 15
- Phase setup, 15
- Phases
 - view, 15
- Place component, 9
- Place components, 18
- Power dissipation, 21, 22, 31
- Reference designation, 17, 24
- Save project, 25
- Select a panel, 17
- Select component, 12
- Settings menu, 35
- Show names, 16
- Show phases, 15
- Single line diagram, 20, 31
- SLD, 31
- Start module, 8
- Technical data, 23
- Template name, 30
- Template, edit, 29
- Title, 29
- Title block, 29
- Work flow, 10
- Work procedure, 10