

# eDesign for Small Buildings Panels

## User Guide

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## Purpose of the Application

This application aims to help professional electricians to design electrical distribution panels for small buildings up to 630 A rated current.

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## Description of the Application

- The application is divided into seven steps.
- Navigation within the steps is possible using the tabs at the top of each page.
- Other functions are accessible on each page of the application:
  - Register
  - Log in and log out
  - Functions available for registered users:
    - Save a project in the cloud; this is implemented automatically every 2 minutes, when changing step in the application and manually with an action on the corresponding icon.
    - Save a project on the computer
    - Take notes about the project in free text
    - My profile, upload discount rates per product family to get the list of material in net prices (depending on the country version); upload company data to get it displayed in the project report. Company data (address, mail, logo, tel ..) can be registered to make them appear on the header page of the exported documents (project report and single line diagram).
  - Functions available for all users:
    - Reference Projects
    - Help: access to video tutorials; to get in touch with Schneider Electric Customer Support Services
    - FAQs
    - Terms and conditions
    - Data privacy
    - About

# Step by Step Description of the Application

## Home Page

- Functions accessible to all users:
  - Use demo project under **Reference design**.
- Functions accessible to logged in users only:
  - Upload a project from the computer.
  - Display the list of projects created with the user account.
  - Open, duplicate or cancel a project.
  - Search a project with free text based on the project name, location, and contact name.
  - Sort projects by project name, date of creation, date of modification, and contact name.
  - Create and manage favorite product or group of favorites.
  - Share a project through a link or via a pre-filled and editable mail.
  - Duplicate a project from the reference design list to be then retrieved and re-used and/or modified in My projects list.

## Project Information View

This page allows you to create the project and to manage the project description:

- Compulsory data for each project: name of project.
- Optional project data: list of contacts for the project with several information to enter for each contact.
- These data are displayed on the first page of the project report which can be accessed from **Documents** page.

## Switchboards View

The list view is dedicated to the creation of the switchboard(s) of the project, the graphic view is dedicated to the connection between the different switchboards (including already existing switchboards in the installation if necessary).

- Compulsory data for each panel:
  - Name of the panel.
  - Position of the panel in the installation: main panel or sub panel.
  - Number of phases at the incoming of the panel.
- Optional panel data:
  - Short circuit current value at the incoming of the panel.
  - Incoming current value in the panel.

Click the **Create** button of a panel in the list to open the **Diagram** page of the panel.

## Diagram

This page allows you to create the electrical diagram of the panel.

### Electrical Diagram Structure and Principle of Use

The main incomer role card of the electrical diagram is already in place.

The main incomer role card cannot be removed from the electrical diagram but can be substituted by the transfer switch card if needed.

The electrical diagram is built by adding role cards out of a list. The list of role cards is accessible in the foldable section on the left side of the page:

- Residual current relay
- Group feeder
- Outgoer
- Residual current circuit breaker
- Load circuit control
- Scheduling-Management
- Energy meter
- Switch disconnecter
- Miscellaneous
- Signalisation
- Multiple circuits
- Transfer switch
- Generator protection

For each role card in the electrical diagram, the user shall choose a product range or a product in the proposed selection of Schneider Electric catalogue before moving to the next steps in the application.

The **Downstream multiple circuits** role card is used downstream an outgoer role card to display the corresponding line in the single line diagram and does not propose any product range.

Any change to the electrical diagram and in the products selection in a panel can be done from the **Diagram** page of this panel.

No change is possible from any other page of the application.

## Build the Electrical Diagram

To build the electrical diagram of the panel, select a role card from the list, then drag and drop it on any **+** popping up while dragging.

To identify the card in the electrical diagram and in the single line diagram, it is recommended to name the card in the bottom part, using the free text, and having a maximum of 35 characters.

The designation is automatically reported in the single line diagram and in the front face view.

A button at the right of the designation space allows to display or hide the role cards located downstream.

It is possible to change the organization of the electrical diagram by:

- Dragging a card:
  - To move it in the electrical diagram by dropping it on any **+** popping up
  - To put it to the workbench and move it back in another place of the electrical diagram. The drop possibilities depend on the chosen card on one hand and on the cards already positioned upstream and downstream on the other hand
- Clicking on the top-right corner of the card:
  - To cancel it
  - To duplicate one copy or more
  - To send it to the workbench

These actions are not applicable to the main incomer, transfer switch and generator protection cards.

For the multiple circuits card only duplicate and delete options are available.

All cards located downstream are moved, duplicated, and removed simultaneously with the upstream card.

Click  to undo any operation.

Click  to redo any operation.

**NOTE:** You can undo and redo up to 10 steps.

## Select a Product in a Role Card

To select the adequate product, click **configure** in the card. A new window opens which proposes three options:

- Select a product category in the proposed catalogue with steps:
  - Select a product category.
  - Select a range.
  - Select the required set of characteristics in the range; the red figure on the top right of the page turns green when completed.
  - Get the reference or list of references; the product data sheet is accessible for each reference.
  - Validate to have all the selected product references in the role card.
- Select with a product reference:
  - Type the reference number of the main product, not valid for auxiliaries and accessories.
  - Select the product from the proposed list.
 

If the reference number does not match with the concerned role card, eDesign indicates the possible role card(s) matching to this reference number.
- Select one of the favorite products defined for this role card (Refer Create a Favorite Products or a Group of Favorites, page 10).
  - Select the favorite product from the list.

It is possible to modify the concerned product by clicking on the upper right corner of the card:

- **Reconfigure** allows to modify the features of the product in the same range.
- **Remove product** allows to change the product range.

The products associated with a PowerTag sensor are highlighted with a dedicated radio wireless link pictogram.

Click  to undo any operation.

Click  to redo any operation.

**NOTE:** You can undo and redo up to 10 steps.

## Create a Favorite Products or a Group of Favorites

This function is accessible to logged in users only.

- To create a favorite product for a role, click the white star in the role card with this product. The white star turns green, the favorite product is added in the list for the role.
- To view the list of favorite products created for each role, click **My Favourite** tab on the left side of the screen.
- To add a favorite product in the electrical diagram, drag it from the list and drop it in the electrical diagram. It is possible to drag and drop a favorite product directly into the corresponding role card in the electrical diagram.
- To cancel a favorite, click the green star in the card either in **My Favourite** tab or in the electrical diagram. The star turns white and the favorite product disappears from the list.

- The same product can be selected as favorite for several roles.

The list of favorite products is accessible for any existing or new project created with the user's login. It is possible to display a selection of roles in My Favorite list.

The creation of a group of favorites is similar but concern the perimeter of several cards connected together. The group of favorites is created by clicking on the 3 dot icon of the upstream card of the concerned group and then selecting **Create a group of favorite**, once the downstream cards are configured. Then the group of favorite appears in the workbench in the concerned section with the given designation if the user has used the designation possibility.

This function is particularly useful to define a groupfeeder type with downstream outgoers or to define a type of protection associated with a load circuit control or a scheduling-management card.

## Circuit Breaker and Switch Disconnecter Favorite

The circuit breakers, switch disconnectors and residual current circuit-breaker selected as favorite product are sorted by switchboard type (main panel or subpanel).

A reminder is located on the top of the diagram view at the left side to precise the type of the switchboard which is being configured by the user.

If the user wants, under his responsibility, to use one of these favorites in a different switchboard type, he can access to it by clicking **all** on the favorites role filter.

## Navigate in the Electrical Diagram

To navigate in the electrical diagram:

- Handle the electrical diagram wherever possible (for example, empty space) and move it in all directions.
- Use the mini map bottom-right to figure out which part of the electrical diagram is displayed.
- Handle and move the blue rectangle in the mini map to navigate into the electrical diagram.

To zoom in and zoom out the electrical diagram:

- Use the scroll wheel of the mouse or two fingers on the computer pad.
- Click the magnifying glass icon at the top of the page.

## Navigate from the Electrical Diagram or from the Single Line Diagram to another One Panel Part of the Same Project

The panel list is accessible on the top left side in the front view.

To navigate towards another panel in the project:

- Click on the name of the displayed panel.
- Click on the name of another panel in the list.

## Single line diagram view

This part creates the single line diagram of the electrical diagram of the panel.

This tab is divided into 2 parts:

- Standard view
- Print preview

## Standard view

Navigation in the standard view is similar to navigation in the electrical diagram.

3 numbering modes are available for the functional marks:

- Incremental
- Subtree
- Personalization

For the incremental and subtree modes, the functional marks are generated automatically as following:

- Protection (Q mark)
- Switch (I mark)
- Other Devices (X mark)

Incremental mode:

A functional mark is identified by a letter indicating the function (see above) and a number indicating the position of the device in the diagram (from left to right and then from the top to the bottom).

Subtree mode:

The functional mark automatically generated is composed of the letter (see above) and a series of numbers corresponding to its downstream position in relation to incomer.

Personalization mode:

The functional marker created automatically for each device regardless of its function is a free space of 10 characters maximum. In this mode a space is available for the legend.

It is not possible to use different modes for the same one-line diagram because when you change the mode, it deletes the functional markers generated by the previous mode and replaces them according to the new mode you choose.

A locking button located at the top right of the screen allows to freeze the numbering. It is then possible to modify the single line diagram without modifying the existing functional marks. The numbers of the new functional marks will be added to the last number created before the locking, whatever the position is in the single line diagram.

After unlocking, all the functional marks are automatically redesigned according to numbering principle mentioned above.

This locking/unlocking function is available only under the incremental mode.

Notes can be added by typing in the corresponding zone top left.

For each branch, a set of characteristics can be added in the title block table below the single line diagram by clicking in a cell and typing the text.

**NOTE:** No change in the electrical diagram is possible from this page.

## Print preview

This preview allows to visualize the number of printed pages regarding the SLD. This number of pages can be optimized according to the number of columns/ devices displayed per page and the level of readability requested. The +/- zoom function allows to set up the number of pages.

You can see the downstream multiple circuits diagram in the places where you have added the card in **Diagram**.

The single line diagram can be generated in .pdf format by clicking the **Export** button; it is also accessible from the **Documents** page.

The generated pdf document has a header page with:

- The logo and company data (if uploaded in the user account)
- The project information as well as the table information (mandatory and optional data)
- An insert is reserved for the management of versions and related modifications. Each following page includes, in addition to the elements of the one-line diagram, a footer with the logo of the user's company, the name of the project, the creation date.

## Front View

The list of the panels in the project is accessible from the electrical diagram and single line diagram page.

To switch to another panel in the project:

- Click on the name of the panel which is currently displayed.
- Click on the name of another panel in the list.

Click  to undo any operation.

Click  to redo any operation.

**NOTE:** You can undo and redo up to 10 steps.

## Select the Enclosure

It is possible to directly select an enclosure range by clicking on the range picture and validate.

To get guidance in selecting a range, set the ratio of modular free space in the panel, set the enclosure characteristics in the proposed list, select a range not marked with an orange mark and validate.

It is required to fine tune the characteristics of the enclosure in the selected range.

## Mount the Devices in the Enclosure

To mount or unmount the devices in the enclosure, select one or several devices in the workbench, then drag and drop them into the enclosure or out of the enclosure respectively.

It is possible to mount and unmount all the devices simultaneously in the enclosure using the dedicated buttons.

The **mount all**  principle is the following:

- The mounting order is similar to the one concerning the configured devices in the diagram view.
- A group feeder and its downstream devices must be on the DIN rail row, a row break is automatically achieved if there is no sufficient space to comply with this rule.
- When Prisma Set G is chosen as enclosure range, the mount all function selects automatically the 600 mm width in this enclosure range.

To fine tune the panel layout, it is possible to move one or several devices inside the enclosure in the **construction mode** by clicking the arrow button.

## Select and Mount the Distribution and Mechanical Elements

To open the distribution block selector, click the **Distributions & FUs** button > **DISTRIBUTIONS**.

It is possible to directly select a distribution block range by clicking the range picture and validate.

Choose the range and configure the features of the distribution block you selected, and then validate them.

From the workbench, drag and drop the distribution block in the enclosure (this drag and drop function is not available for comb busbar range)

## Complete the PrismaSeT Switchboard

To go to the mechanical elements section click the **Distributions & FUs** button > **MECHANICAL ELEMENTS**.

In the mechanical elements section, it's possible to complete the switchboard with:

- DIN rail and modular front plate for the reserve space
- Earth bar
- DIN rail and plains plats for terminal blocks
- Front plate

A similar choice is proposed via a right-click, once the enclosure has been selected on the front face.

These four mechanical elements can be modified by selection on the front face and then a right click **modify the installation system**:

A modification regarding the height positioning is proposed for:

- The DIN rail and modular front plate
- The DIN rail and plains plats for terminal blocks

For the front plate, a modification of the height and the plate type (transparent, cut out) is proposed.

The button **add front plates** add automatically plates on the available space.

## Modify the Enclosure Features

It is possible to modify the enclosure in the same range by right-clicking within the enclosure:

- Modify the enclosure characteristics
- Cancel the enclosure
- Modify the height
- Modify the width

It is possible to change the enclosure range by clicking the **modify range** button on the right side of the screen. The devices which are displayed in the workbench, to be then mounted in the new enclosure.(except for the comb busbar range).

## Manage the enclosure accessories

It's possible to add accessories to the enclosure in the front view by right clicking in the envelope and then clicking on manage accessories.

A tree menu allows you to choose the type of accessory and to add it to the BOM in the desired quantity by clicking on the plus button that appears on the right. A link to the product sheet allows you to view the characteristics of the chosen accessory.

## Information on the Panel

The following information is displayed on the right side of the screen:

- The characteristics of the enclosure.
- The empty space in the panel.
- The buttons to change the displayed layers of the panel.
- Modification of the enclosure dimensions.

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## Information on the Products in the Panel

By selecting either the entire enclosure or a device or a group of devices, the product descriptions are displayed in the properties section, which are grouped into three categories:

- Enclosure
- Installation system
- Devices and distribution blocks

To get the detailed information and documentation is available for each product by clicking on the link **product data**.

A mouse over a product mounted inside the panel allows to have the designation of this element defined in the diagram.

A left-click on a product makes a blue frame appear around the concerned and a black frame around the upstream device. This upstream-downstream identification function operates also for the products sorted in the workbench.

## Create Snapshot of the Panel Front View

It is possible to create a snapshot of the displayed front view of the panel by clicking the camera icon on the top bar of the screen. The snapshot is saved on the computer and can be added to the project documentation (refer Documents, page 18).

The snapshot of the panel is included in the project report document.

## Generate the Labels

It's possible to visualize the labels of the panel for the modular products and then export the labels under PDF format. The content of the label is by default the functional marker generated in the SLD and the designation if previously defined in the electrical diagram view.

## Bill of Material

This section displays the list of products in the project.

The list of products includes the public price list value and net price value – for logged in users only, calculated with discount ratios by product family.

When a project can be updated (project designed before a new price list or a new discount rate), an information is displayed on the electrical diagram and on the bill of material view. a new column appears in the bill of material to visualize the new price list or the new discount rate or both. Once the user has validated the updating, all the net prices are updated with the new price list and new discount rate displayed.

The discount ratio values can be uploaded in an excel file by clicking the top left of the screen, then in the My Profile section.

It is possible to access the documentation of a product in the list of material by clicking on the reference number.

This list can display the references:

- For one panel
- For all the panels of the project

The list can be displayed in two ways:

- By panel, grouped by product category in each panel
- All the references of one panel or the entire project

It is possible to add products to the panels of the project in the **miscellaneous** section of the list of material at the bottom of the page.

For Schneider Electric products, a quick search by reference allows to automatically display the product description and its price and to add the desired quantity in the bill of materials.

The products can either be:

- Selected from Schneider Electric connected products
- Selected from Schneider Electric other products
- Created by the user (for example, products from other suppliers by typing text in the list)

The list of material is included in the project report document.

The PowerTag Energy sensor products are highlighted with a radio wireless pictogram.

Click on **Buy from Distributor** and select the distributor from the list shown to buy the products listed on the bill of materials.

**NOTE:**

- This feature is available in France region only.
- This will redirect the user to the external website of the distributor.
- Any changes made in the quantities and products included in the bill of material in the distributor website will not effect the bill of material generated in the edesign website.

## Documents

This page allows you to:

- Export the list of materials in .xlsx format and save it on the computer.
- Export the project report document in .docx format.
- Export the single line diagram of the panels of the project in .pdf format.
- Download the CE & PEP certificates compilation of the different devices of the panel under a zip format. An intermediary view allows to get the availability of the different certificates according to the products before the compilation download.
- Upload documents from the computer and attach them to the project.
- Manage the list of documents attached to the project.



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