



# CADMATIC

## CADMATIC Electrical

Release notes

2022T3

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## Release notes

The release notes for CADMATIC Electrical version 2022T3 are described in this document.

The following conventions apply to these release notes:

- Filenames, pathnames and environment variables are in *italics*.
- Commands, options, dialog names, and menu choices shown in the user interface are in **bold**.

## Cabinet Layout

### New and improved features

Project information/settings	In the project tree view, you can now open the project settings by clicking the  button.
Schema drawings/sheets handling	<p>The SLEHTI method is now supported. Until now, the different object types (such as devices and installation rails) have been on their own layers on top of each other. When using the sheet method, all sheet's / distribution board's objects are on the same SLEHTI layer side by side.</p> <p>Drawing the mounting plate and the door side by side is easier for the user, and also the most common way to present the different parts in Cabinet Layout drawings.</p> <p>When starting a drawing, you can now select whether to use the sheet method or the old method.</p>
Wiring	The <b>Assign cables and wires in drawing to this cable</b> function added in the project tree makes it possible to assign a cable in a drawing to another cable.
Drawing cabinets	<p>The following changes have been made to the <b>Draw cabinet</b> function:</p> <ul style="list-style-type: none"> <li>• With the <b>Place side by side</b> option, you can insert the frame, the mounting plate and the door side by side simultaneously. Otherwise they will be inserted on their own layers on top of each other.</li> </ul>

	<ul style="list-style-type: none"> <li>Previously, location was only assigned to the frame. Now, it is also assigned to the mounting plate and door which allows them to be found below the correct location in the project tree as well.</li> </ul>
Layer functions	Layer functions (such as turning layers on and off) have been moved from the <b>Drawings handling</b> toolbar to their own <b>Layer functions</b> toolbar.

## Bug fixes

- When removing a cable and returning to the original layer, the other layer was turned off.
- Devices were by default assigned the wrong 3D symbol.
- The **Delete overlapping elements** function did not work as should.

## Distribution Board

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### New and improved features

Project information/settings	In the project tree view, you can now open the project settings by clicking the  button.
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## Bug fixes

- Copying groups did not work correctly.
- In a new Distribution Board schema, a new distribution board was created as a location.
- System information occasionally disappeared from a feeder when there was no database.
- In large projects, using the feeder dialog was very slow.
- Conversion from version 19 to version 22 did not handle groups and feeders correctly.

# Layout

## New and improved features

Project information/settings	In the project tree view, you can now open the project settings by clicking the  button.
Symbols	<p>Three new symbols have been added to the <b>Plug sockets</b> menu:</p> <ul style="list-style-type: none"> <li>• <b>Plug socket 2-gang, with transformer</b></li> <li>• <b>Plug socket 2-gang, switch, with transformer</b></li> <li>• <b>Plug socket, 2-gang, switch</b></li> </ul>
Distribution boards and groups	<p>The following changes have been made to the distribution board and group functions:</p> <ul style="list-style-type: none"> <li>• When decimals (comma or point as the separator) are used in group numbering and a new group is created, the application suggests the next group number as follows: <ul style="list-style-type: none"> <li>◦ If the previous group number was 1.1, the application suggests group number 1.2.</li> <li>◦ If the previous group number was 1.3, the application suggests group number 2.1.</li> <li>◦ When the user enters an integer (such as 2), the application suggests the next consecutive integer (such as 3).</li> <li>◦ If other characters (such as underscore) are used in group numbering, the number after that character is increased: after 1_1, the application suggests group number 1_2.</li> </ul> </li> <li>• You can now add a new group between existing groups so that the following group numbers will be adjusted accordingly. For example, if there already are groups 6, 7 and 8 and you add a new group 7, the old group 7 will become 8 and the old group 8 will become 9.</li> </ul> <p>However, group numbering will not be adjusted when you remove groups.</p>

	<ul style="list-style-type: none"> <li>• In Electrical Basic and in drawings not in project, it is now possible to add multiple feeders for groups.</li> <li>• It is now possible to copy a distribution board from the <b>Distribution Boards and groups</b> project tree.</li> <li>• On the <b>Feeders</b> tab in the <b>Distribution Board properties</b> dialog, it is now possible to mass edit the cables by selecting the desired rows, right-clicking and selecting <b>Select wirings</b>, and then the desired cable type and the system.</li> <li>• It is now possible to use groups in a drawing of type <b>Layout, Schema</b>. In the project tree, the <b>Insert group marking into drawing</b> and <b>Show group wirings</b> functions have been added for groups to the right-click menu. The groups and cables of layout schema drawings are not taken into account in electrotechnical calculations.</li> </ul>
<p>Wiring</p>	<p>The following changes have been made to the wiring functions:</p> <ul style="list-style-type: none"> <li>• Double-clicking a cable marking opens the <b>Wiring data</b> dialog, where you can define the necessary wiring data.</li> <li>• The <b>Assign cables and wires in drawing to this cable</b> function added in the project tree makes it possible to assign a cable in a drawing to another cable.</li> </ul>
<p>3D drawing functions</p>	<p>The following changes have been made to the IFC property sets in Electrical Premium:</p> <ul style="list-style-type: none"> <li>• New properties introduced in IFC4 have been added to the standard property sets.</li> <li>• In standard property sets, additional information has been added to information for which no values are available.</li> <li>• Several additional information definitions have been created for properties. For some of them, picking lists with default values have also been added.</li> </ul>
<p>Raceways</p>	<p>The <b>Draw caps</b> option added in the <b>Raceway</b> dialog's <b>Geometry</b> section makes it possible to draw end lines for raceways.</p>

Example project	The Electrical example project has been complemented to work better with the new features of the previous release.
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## Bug fixes

- Deleting a feeder from the project tree did not work as should.
- The **Edit Distribution Board** function created a new distribution board occurrence.
- Import did not work in Distribution board and group management (Premium).
- When selecting to copy a distribution board without groups in Distribution board and group management, the groups were still copied.
- When creating a group and editing the feeder symbol without saving, a second symbol was created for the feeder.
- There were several problems related to location when creating groups. For example, the location was left empty, it was possible to create groups to all kinds of locations, and the type of the default location was not distribution board.
- When editing a distribution board, a newly created group was not shown in the **Feeders** grid right away.
- In the **Cable properties** dialog, clicking the **ID** field resulted in an error if database was not in use.
- Hiding wiring on intersections did not work properly.
- In some cases, raceways were exported to IFC without graphics.
- The program crashed when changing the floor while using the **Draw wiring into drawing** function.
- After creating a distribution board and then deleting it, it was not possible to create another distribution board with the same name right away.
- After closing the **New group** dialog, the project tree was not updated and the symbol inserting function did not start if there was no project database.
- Deleting the wiring set occurrence from the drawing did not delete the set from the project tree.
- When wiring from a distribution board to a device, no group was created.
- After drawing a cable to a distribution board, the **To** and **From** directions where not updated when the feeder type was changed to incoming.
- In the **Data network** dialog, after deleting all panels from a cabinet it was not possible to delete the cabinet itself.

- The **Group number always to angle 0** setting did not work as should.
- New protective devices were not saved to the project database.
- In the **Group / feeder properties** dialog, adding a feeder and changing the group number resulted in an error.
- When wiring information was removed from a group marking, the information still remained on the group row in the distribution board schema.
- Groups were shown in the project tree even though their feeders had been deleted in Distribution board and group management.
- Marking wiring data to Electrical network wiring crashed the application.
- The application sometimes crashed when drawing a vertical bend raceway.
- In electrotechnical calculations, the maximum length for a cable was calculated incorrectly.
- Conversion from version 19 to version 22 did not handle groups and feeders correctly.
- The **Autom. calculation** setting in the **Group / feeder properties** dialog was not taken into account in electrotechnical calculations.
- Opening drawings took a long time because the drawing and objects were unnecessarily regenerated when setting the customer ID visibility.
- In the group dialog, it was possible to open the database edit dialog for cables, protective devices, and busbars even when the drawing was not in the database.
- Raceway elevation was not marked correctly.
- When moving a suspension rail, lines disappeared from some of the corners.

## Schematics

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### New and improved features

Project information/settings	In the project tree view, you can now open the project settings by clicking the  button.
Schematics settings	It is now possible to define the default color for cables and wiring sets in the Schematics-specific settings.
Wiring	The following changes have been made to the wiring functions in Electrical Premium: <ul style="list-style-type: none"> <li>• It is now possible to set the color for wires, cables, and wiring</li> </ul>

	<p>sets in the <b>Wiring</b> window. In addition, you can easily go to the Schematics-specific settings to define the default colors by clicking the new <b>Defaults</b> button.</p> <ul style="list-style-type: none"> <li>• The drawing of a wiring set has been unified with the drawing of wires and cables so that the <b>ID</b> and <b>Add wiring marking</b> fields have been moved to the top of the window. In addition, the <b>Description</b> field has been removed.</li> <li>• The functions <b>Draw wiring set</b>, <b>Redraw wiring set</b> and <b>Extend wiring set</b> have been added to the wiring set right-click menu.</li> <li>• A new option, <b>Intersect line</b>, has been added to the <b>Mark wire data into the drawing</b> function. With this option, you can align the wiring marks in the drawing. Previously, the location of the wiring marks were based on the wires and if the wires were of different lengths, they were not aligned.</li> <li>• When you select cable wire as the wire type in the <b>Wiring</b> window, the cable details section now shows the <b>From</b> and <b>To</b> information and you can also define them for new cables.</li> <li>• A new option, <b>Cable type</b>, has been added to the <b>Draw cable</b> function. If you do not select it, the cable will be of type undefined. If you select it, the cable will be of the type selected from the list.</li> </ul>
Part numbering	For the I/O channel symbol type, it is now possible to start part numbering from zero instead of one.

## Bug fixes

- Changing wire numbers through the **Wiring** window changed the default wire order.
- The I/O station information entered with **Insert object info to drawing** was not correctly shown.
- References were not correctly created when drawing through a connection point.
- After first inserting an unpaired wiring reference and canceling the drawing of the other end and then starting to draw a new wire, the **Wiring reference** dialog no longer opened and an empty reference remained.
- I/O card creation did not show the location, circuit, or I/O rack selected previously.

- When drawing a cable between boundaries, wiring references did not work as should.
- When drawing a wiring set between boundaries and then changing the wiring reference settings, the reference text was not generated correctly for the set.
- Changing circuit for an I/O card only removed the I/O card from the rack.
- After clearing additional information in the database, opening a drawing restored it.
- Showing references for boundaries between files did not work if the other file was closed and the boundaries were in different locations.
- Editing I/O properties was slow.
- Space information disappeared from a device when the layout drawing was not open.
- The SPEK040 and SPEK041 symbols were out of grid spacing.
- When copying objects from one sheet to the newly created next sheet, drawing frame was not placed.
- Deleting the wiring set occurrence from the drawing did not delete the set from the project tree.
- Inserting a symbol on a wire did not work as should.
- It was possible to create duplicate IDs when copying devices in the project tree.
- Wiring references were shown incorrectly for references pointing downwards.
- I/O card did not show I/O text from channel 0.
- First removing and then re-adding I/O card channels resulted in an error.
- In the **I/O properties** dialog, channel 0 was not available in the **Channel number** drop-down menu.
- The cable occurrences connected to a device were not updated when the device description changed.
- The project tree was not automatically updated when the I/O channel was changed.
- The application occasionally crashed after synching and selecting a wire.
- The wiring window did not become active when the wiring function was started.
- Cables in wiring sets were not listed as cable occurrences in cable lists.
- When drawing a new cable, the application did not check whether the ID already existed.

## Electrical DB (Premium)

### New and improved features

Cables	<p>New columns are now available in the <b>Cables</b> grid:</p> <ul style="list-style-type: none"> <li>• <b>From Product model</b> and <b>To Product model</b></li> <li>• Columns related to the <b>From</b> and <b>To</b> space information: <ul style="list-style-type: none"> <li>◦ <b>From Space name</b> and <b>To Space name</b></li> <li>◦ <b>From Space number</b> and <b>To Space number</b></li> <li>◦ <b>From Space number text</b> and <b>To Space number text</b></li> </ul> </li> </ul>
Groups	<p>On the <b>Groups</b> tab, you can now easily add a protective device or busbar to multiple feeders at once by dragging and dropping them from the auxiliary grids.</p>
Product models	<p>With the new <b>Lock device pins according to the product model</b> option in the <b>Product model</b> dialog, you can lock the pins so that the devices using the product model will always use the product model pins.</p>
Product information	<p>Previously, database description was shown in both Finnish and English in the product database settings. Now, only one of them is shown, depending on the application language. However, you can see the description in the other language by clicking the  button next to the description field.</p>
Plates	<p>In Plate definition management, the following fields are now available for plate texts:</p> <ul style="list-style-type: none"> <li>• <b>From Pin</b></li> <li>• <b>To Pin</b></li> </ul> <p>With these fields, it is possible to show the pin information for wire plates, for example.</p>
I/Os	<p>In the <b>I/O</b> grid, you can now swap channel information (channel number, pins and address) of the selected I/Os with the <b>Swap I/O information between channels</b> function.</p>
Part numbering	<p>For the I/O channel symbol type, it is now possible to start part numbering from zero instead of one.</p>

Additional information	<p>The following changes have been made to additional information:</p> <ul style="list-style-type: none"><li>• In picking lists, the description for IP classes is now the same as the value.</li><li>• The ETIM database has been updated.</li></ul>
Reports	<p>The following changes have been made to reports:</p> <ul style="list-style-type: none"><li>• The variable <i>\$Feeder type description\$</i> has been added for the Distribution Board and Group list type. With this variable, you can include the incoming/outgoing feeders in your reports.</li><li>• The variable <i>\$Parent Type Description\$</i> has been added for plate list types. With this variable, you can include the target of the plate (cable/device/location).</li><li>• The short-circuit current variables have been updated: <i>\$Distribution Boards.Short-circuit current\$</i> and <i>\$Groups.Short-circuit current\$</i> are both now <i>\$Short-circuit current\$</i>.</li></ul>

## Bug fixes

- In the **Cable properties** dialog, it was not possible to edit the **From** and **To** information even though there were no occurrences.
- Connecting to SQL with limited rights resulted in an error.
- When importing from the clipboard, consecutive numbering was not working.
- It was not possible to create a location without electrical position.
- When SQL server was in use, adding product models to projects did not work.
- Changing the wire type from undefined to internal resulted in an error.
- The user was not notified if there was a problem in creating the backup file.
- When editing in Excel, I/O card data was lost.
- When new product information was created, it was not visible unless the database was updated.
- In the **Cable properties** dialog, the warning icon was incorrectly shown for the **From** and **To** information.
- Project number was missing from SQL Server project management.
- The **Project information/settings** dialog did not always show the project information.

- When importing from a clipboard project, only one plate was imported when multiple devices had plates of the same type.
- When selecting cables for a group, the wiring sets did not show which cables were included.
- When mass editing items, only the **Show tabs** option was shown when right-clicking.
- When synching changes, deleted objects caused errors.
- The **From** and **To** information of wire plates did not work.
- In I/O import, the start address in and out values were not imported if the I/O had the device card full ID.
- In the **Search and replace** function, values were replaced in other columns than those defined with the **Searching at columns** option.
- Right-clicking with multiple cells selected in different columns resulted in an error.
- Moving a device from one location to another in the project tree was not possible if the target location already had a device with the same ID.
- Moving a device from one circuit to another in the project tree was possible, even though the target circuit already had a device with the same ID.
- Values added in a picking list were not available for selection in the right-click drop-down menu until after a restart.
- Wrong information was shown for REKA cable types in the standard database.
- Negative values were not handled correctly.
- Opening product model information or project database resulted in an error.
- Additional information added to product information was not saved to the database.
- Circuit information disappeared from a drawing not added to the project.