

SEE Electrical V6R1 News

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A WHAT'S NEW IN SEE ELECTRICAL

A.1. FROM VERSION 5 RELEASE 1 TO VERSION 6 RELEASE 1

A.1.1. GENERAL IMPROVEMENTS

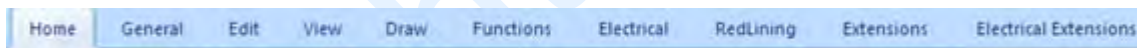
A.1.1.a. NEW USER INTERFACE

The new *SEE Electrical* user interface is based on the *Microsoft Office 2010* look and feel.

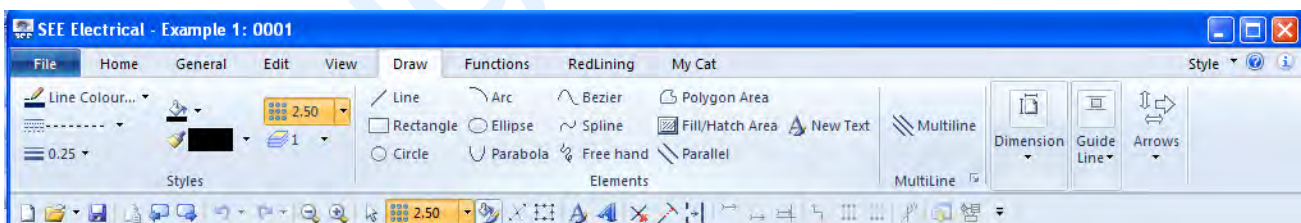


Ribbon Technology

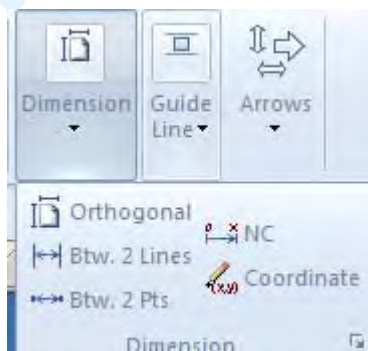
SEE Electrical now uses the *Ribbon Technology*. The menus are replaced by **Categories**.




The **Categories** contain **Panels** with the single commands.



Subpanels are available when it is not possible to display all commands.



To display the settings for some specific panels is available a  button that allows the access to the different Properties windows.

Application Look Styles

Several Application Styles are available and allow the change of the *SEE Electrical* appearance. Depending on the chosen style is available a **File** category or a **File** button.

Quick Access Toolbar

The **Quick Access Toolbar** contains icons for the different commands and can be customized. The user can add or remove commands from the Toolbar.

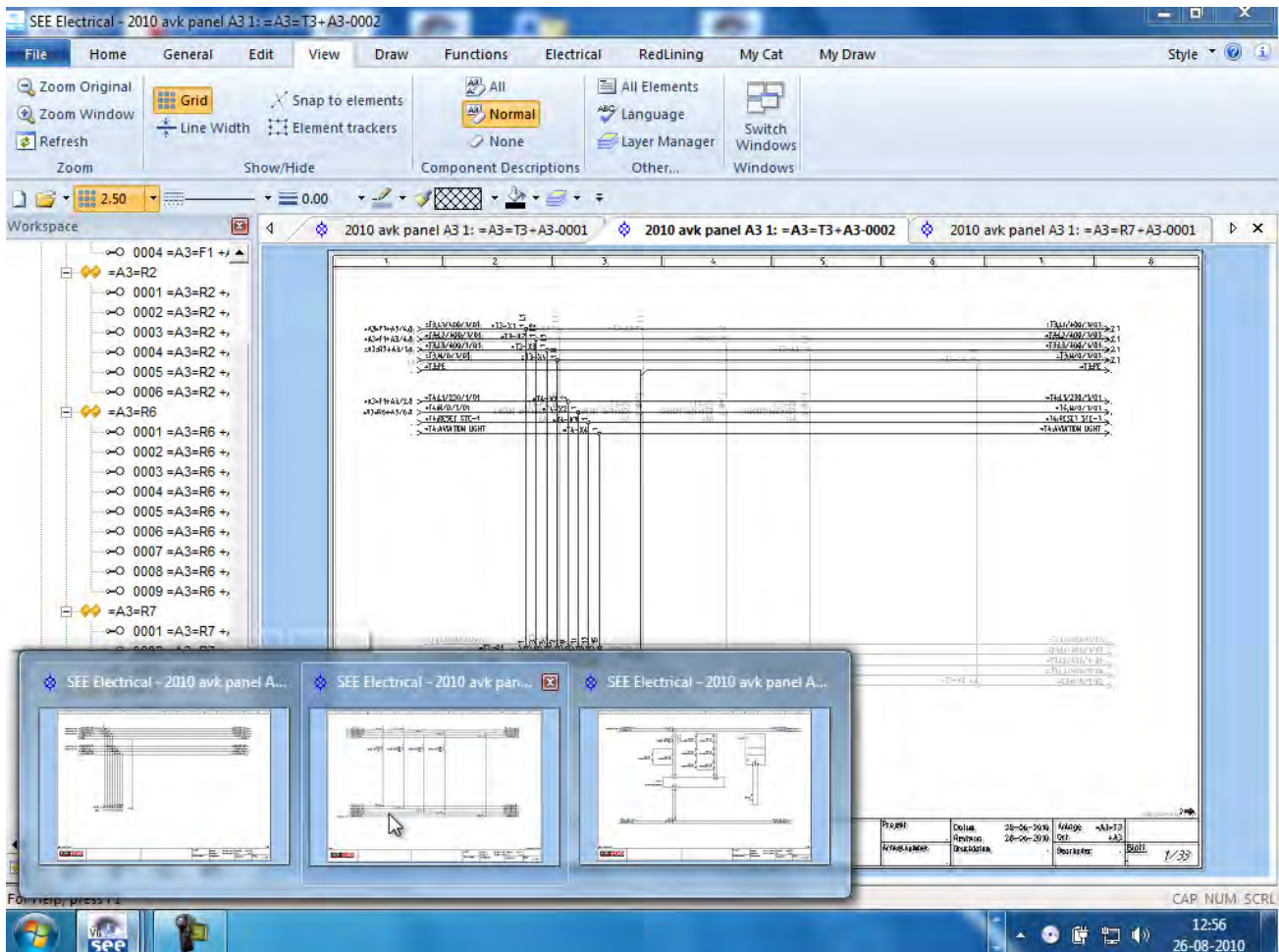


A.1.1.b. USER DEFINED CATEGORIES

The **Extensions** and **Electrical Extensions** categories in *SEE Electrical* can be modified by the user. The commands can be added or removed with the help of the *Customizer.exe*, available in the installation folder of the software.

A.1.1.c. SUPPORT FOR THUMBNAIL LIVE PREVIEWS IN WINDOWS VISTA AND WINDOWS 7

The Aero Peek technique, used *Windows Vista* and *Windows 7*, is supported for the opened pages. A preview of the opened pages appears when clicking the *SEE Electrical* icon in the *Windows Task Bar*. The pages can be displayed by clicking the desired page's preview.



A.1.1.d. FLOATING STYLE MENU

A **Floating Style** menu is available for the selected objects in *SEE Electrical*. The menu contains the common commands for the modification of the graphical attributes.



The visualization of the floating menu can be managed in the **System Settings** window.

A.1.1.e. "COVER SHEET" DRAWING TYPE

A new **Cover Sheet** category is available in the workspace explorer. It allows the management of cover sheets and other additional drawings (for example drawings with mechanical design) outside of the circuit diagrams.

A.1.1.f. ENHANCEMENTS IN THE DATE/REVISION DATE INSERTION

The revision date is not added automatically at the creation of the page. If the automatic revision date insertion is disabled, it is possible to delete one or multiple revision date(s) in the **Documents Editor** (**Advanced** level). It is possible now to add time to the revision date and to the date of creation of the page.

A.1.1.g. ENHANCEMENTS IN FINDING AND REPLACING TEXT

To the **Find and Replace** command have been added options that allow the search and the replacement of part strings.

A.1.1.h. THE GO TO COMMAND

Advanced

The **Go To** pop-up command is available for components inserted in different sheets and modules. It allows the user to go directly to the same component inserted in another sheet and/or module. If, in Cabinets module, the components are attached to a rail, the user has to select the single component in order to execute the **Go To** pop-up command.

A.1.1.i. ENHANCEMENTS IN THE DXB\DXF\DWG IMPORT/EXPORT

SEE Electrical V6R1 supports AutoCAD 2010 format.

A.1.1.j. ENHANCEMENTS IN THE DIMENSIONING

Page dimensions

The settings for the scale of the page can be customized with the help of the **Properties > Page** command. After a change is set up, a question appears and gives you the possibility to choose if the dimensions of the page shall be adapted to the modified scale or not.

Dimension between 2 points

It is possible to define the position of the dimension line.

A.1.1.k. HANDLING OF PICTURES

Basic

It is now possible to rotate the inserted pictures (BMP, JPG, etc.)

A.1.1.l. ENHANCEMENTS IN THE CALLOUTS

In *SEE Electrical V6R1* the callouts' texts can be inserted in more than one line. For this purpose is used the CTRL+ENTER shortcut key combination.

A.1.1.m. NEW SHORTCUTS

New shortcuts, used for the rotation and scaling of the elements, are available in *SEE Electrical V6R1*. The new shortcuts are introduced to support laptops in a better way. The old shortcuts are still active and are listed in brackets in the table below.

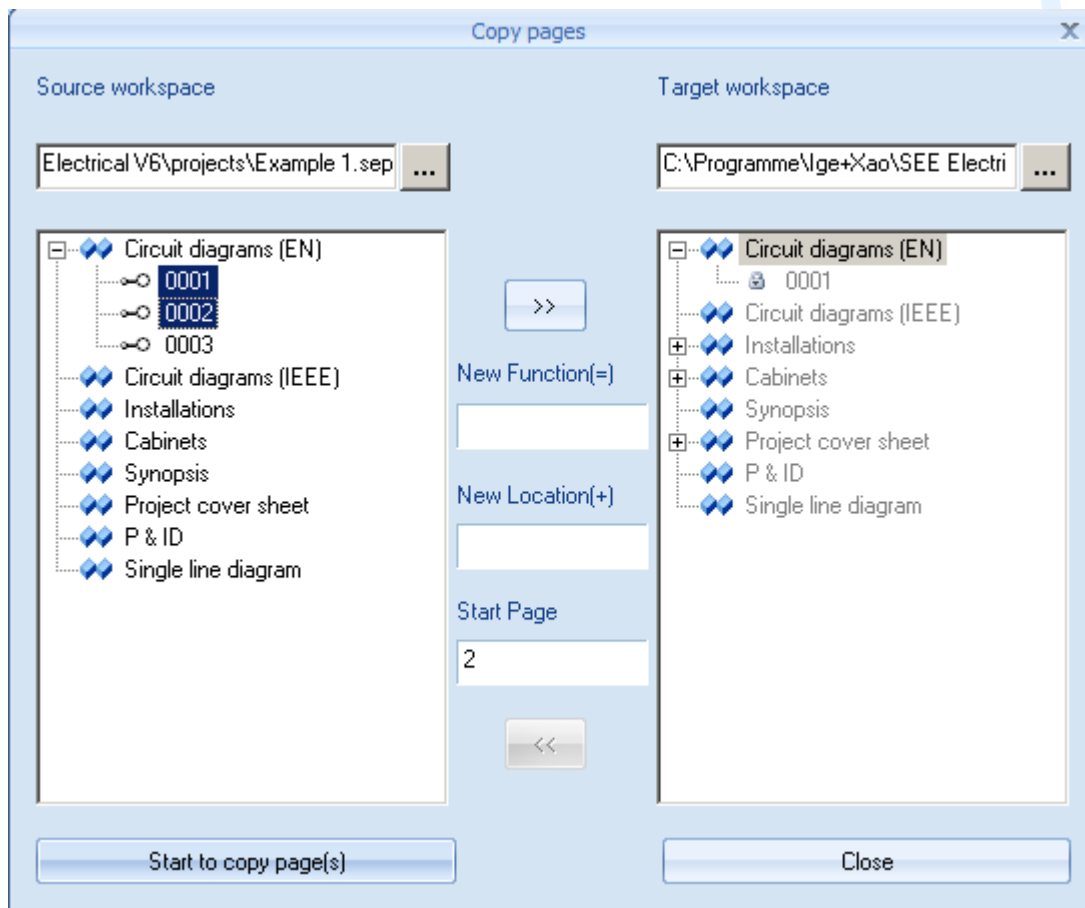
z (AND +)	Turns the symbol or element at 90° counters clockwise while moving it or inserting it from the clipboard.
y (AND -)	Turns the symbol or element at 90° clockwise while moving it or inserting it from the clipboard.
a (AND /)	Scales the symbol or element by factor ½ while moving it or inserting it from the clipboard.
s (AND *)	Scales the symbol or element by factor 2 while moving it or inserting it from the clipboard.

A.1.2. FUNCTIONAL IMPROVEMENTS

A.1.2.a. COPYING PAGES THROUGH WORKSPACES

Advanced

The **Copy P** command, available in the **Commands** pane, allows you to copy pages from one workspace to another.



If the terminal strips and cables are present on several pages, their names will be changed to avoid duplication. After the copying, they have to be renamed manually or with the help of the database editors.

The names of the slaves inserted in the same page as the master are changed according to the change of the name of the master. If the slaves are inserted in a page different than the one of the master, you have to control their names after the page copying.

A.1.2.b. ENHANCED SUPPORT FOR COMPONENTS WITH SUBCOMPONENTS

Basic

Components with terminal strips, plugs or subcomponents are used more and more so *SEE Electrical V6R1* has enhanced the support for these components.

A.1.2.c. TRANSLATION OF PART STRINGS

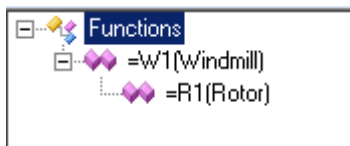
Advanced

It is possible now to translate part strings. New functionalities have been added to the **Translation** dialogue and allow you to translate only parts of the phrases. For example:

<u>Source text</u>	<u>French translation</u>
Motor	Moteur
Motor control	Controle du moteur
<u>Diagram: Source text</u>	<u>French translation</u>
Motor 1	Moteur 1
Motor 2	Moteur 2
Motor control	Controle du moteur
Motor control circuit	Controle du moteur circuit

A.1.2.d. DESCRIPTION SEPARATOR FOR FUNCTION/LOCATION

It is possible to use the description text for the Function/Location in your templates. The texts are added via the **Function & Location** node in the **Text Attributes** area of the **Text** window. The "Description separator" field in the **Aspects** dialogue window allows you to define the separator to be used in case the function/location contains two or more levels.

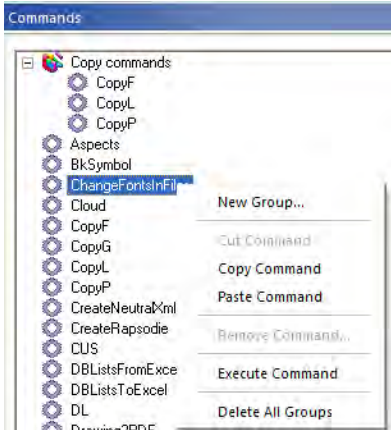


A.1.2.e. PRODUCTS MANAGER

A new "**Product database**" option has been added to the **Function/Location management** area in the **Workspace Properties** window. It allows you to manage the Products aspect if the Function/Location management is active.

A.1.2.f. GROUPING THE COMMANDS IN THE COMMANDS PANE

A pop-up menu in the **Commands Explorer** allows you to group the commands.



You can create, modify and delete groups. You can also copy commands from one group to another and execute the commands directly from the group. The commands are transferred to the group, but remain also in the main directory of the **Commands** pane.

A.1.2.g. GENERATION OF PLC BLACK BOXES FROM THE CHANNEL DEFINITION

PLC main symbols and PLC I/Os can be created as black boxes using the channel definition.

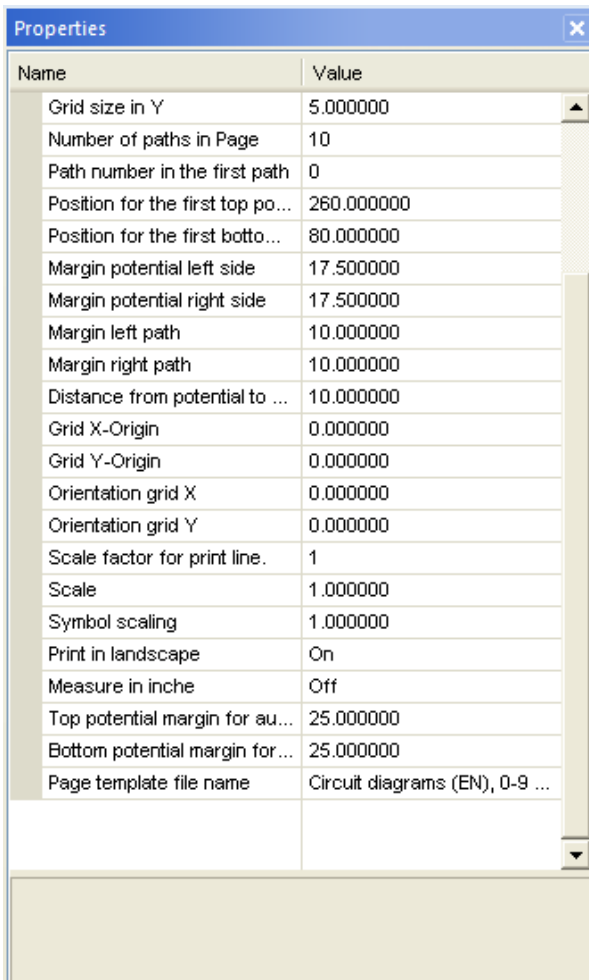
A.1.3. IMPORVEMENTS IN CIRCUIT DIAGRAMS MODULE

A.1.3.a. PAGE PROPERTIES

Basic

The page properties information has been enhanced. A new field is available in the **Page Properties** window. In this field is listed the template used for the page. The information is available if the page has been created in *SEE Electrical V6R1* or the page template has been changed in *SEE Electrical V6R1*.

It is possible to change the page template from the "Page template file name" field.



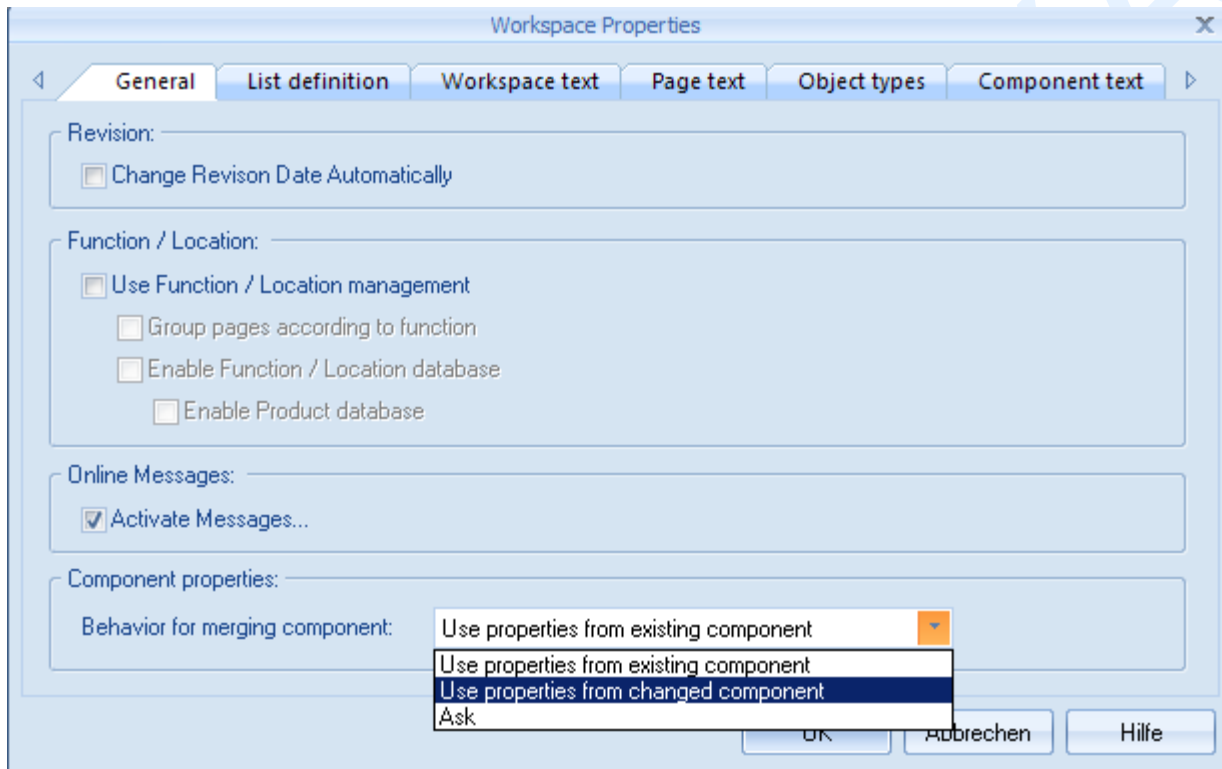
In the Circuit Diagrams EN module a question appears if the page template that was selected has a different number of paths than the already existing one. In this case, there is an option to renumber the components according to the paths of the new page template.

A.1.3.b. ENHANCEMENTS IN THE COPYING OF COMPONENTS/CABLES

Copying of components

It is possible now to choose which properties to keep when copying the component/cable.

A new setting is available within the **General** tab of the **Workspace Properties** window.



The "**Behaviour for merging component**" option controls the way of merging the properties of the component. It is possible to choose if the new component will keep its properties, or copy the properties of the existing one.

- ✓ "**Use Properties of existing component**" - the new component automatically takes the properties of the existing one.
- ✓ "**Use properties from changed component**" - the new components keeps its own properties.
- ✓ "**Ask**" - a question appears every time at the insertion of a component with a name that already exists.

The setting is valid for components inserted from the **Components Explorer**. The setting is not valid if slaves are attached to an already existing master and for PLC racks and their signals.

Copying of cables

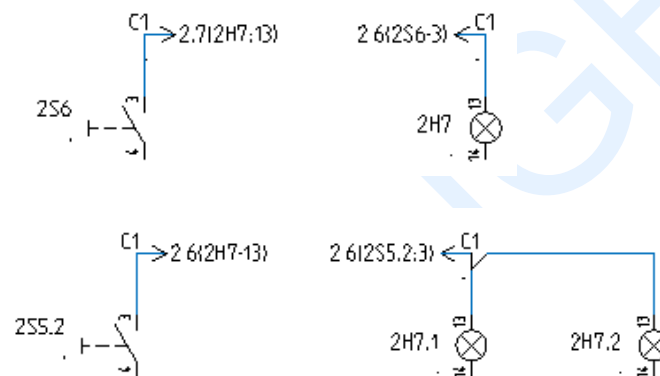
A new possibility to avoid the duplication of cable name has been implemented in SEE Electrical V6R1. It is possible now, in the **Circuit Diagrams Properties** window, to define the component code to be used in the cable name.

A.1.3.c. CROSS REFERENCES

Target component's name display

Standard

If only one target is used in a cross reference, it displays the name of the target component.

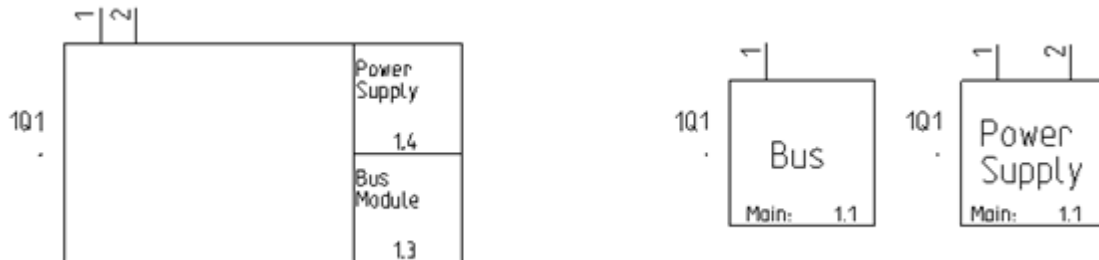


The visibility of the target's name can be switched on/off in the "Show target" field available in the cross references' **Properties** window.

Name	Value
General	
Object	Symbol
Attributes	
Product (-)	C1
Product Index	
Sheet/Path ...	1.5(1A8:2)
Show target	On
Symbol	SignalRefTo0
Object	
Property specifying the object kind...	

Multiple cross-references

It is possible now to insert multiple cross references to a component.



The result is obtained by using the "Component with auxiliary contact" component type.

A.1.4. WIRE PROPERTIES/NUMBERS ENHANCEMENTS

A.1.4.a. POSITION OF THE WIRE/POTENTIAL NUMBER

Standard

If the Signal type wire logic is not activated, it is possible to define the position of the wire number and the text attributes, colour and size.

If the Signal type wire logic is selected, it is possible to define additionally the attributes and the position of the potential name.

The positions of the properties are defined as a symbol. For the definition of the horizontal and vertical wires are necessary two symbols – one for the horizontal wire and one for the vertical wire. Each symbol contains one line which represents the wire and the texts for the wire number, potential name, wire size and wire number. If no text representation exists in the symbol, then will be used the default settings.

After the change in the symbol, *SEE Electrical* has to be restarted. The symbols have to be defined in the registry settings in the following way:

<symbol database>\<symbol folder>\<symbol name>.

- The registry value for the horizontal wire symbol is: ...\\1000\WirePropSettings
 - The registry value for the vertical wire symbol is: ...\\1000\WirePropSettingsV
- This setting is used for the Circuit diagram EN and IEEE modules.

The registry settings

...\\Settings\Text\DefaultWirePropertiesFont
and

...\\Settings\Text\DefaultPotentialNameFont

introduced in V4R1\V5R1, are not working any more.

A.1.4.b. VISIBILITY FOR WIRE TEXTS

It is possible now to switch on/off the visibility of the wire texts for the whole net, for a single wire and even for a wire segment.

Signal type

For each signal type you can define different attributes (colour, size, line width, etc.) and visibility for wire texts. When you draw a wire you have to choose the correct signal type.

Net

A net can connect multiple connection points from a lot of components. If you use the signal type wire logic, multiple nets can have the same signal type.

Wire

A wire is a physical object that always links exactly two components.

Wire segment

The wire segment represents a part of the wire.

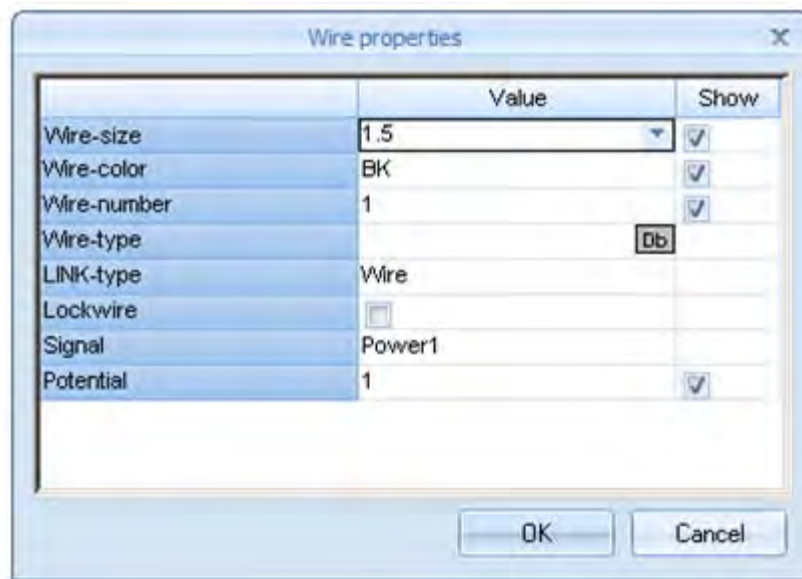
If the Signal type wire logic is used, this can be defined in the **Signal Type Setup** window, accessible in the **Wires** tab of the **Circuit Diagrams Properties** window.

If the Potential wire logic is used, the visibility of the wire texts can be managed in the **Graphical behaviour** area of the **Wires** tab. The visibility for the net can be managed through the **Wire Properties** command.

If the Unique wire logic is used, the visibility of the wire texts can be managed in the **Graphical behaviour** area of the **Wires** tab. The visibility for wire can be managed through the **Wire Properties** command.

A.1.4.c. WIRE PROPERTIES WINDOW

The **Wire Properties** window now offers the possibility to toggle separately the visibility of the wire size, colour and number.



A.1.4.d. WIRE PROPERTIES PANE

Two nodes in the **Properties** pane allow the management of the visibility of the wire and wire segment attributes.

These nodes are *Attributes* and *Segment Attributes*.

Properties	
Name	Value
General	
Object	Wire
Attributes	
Wire-size	1,5
Show wire-size	Off
Wire-color	Bk
Show wire-colour	On
Wire-number	39
Show wire number	On
LINK-type	Wire
Wire-type	
Lockwire	Off
Signal	Default
Potential	50
Show potential	On
Start X1	230.000000
Start Y1	150.000000
End X2	270.000000
End Y2	150.000000
Segment Attributes	
Show wire number	Off
Show potential	On
Show wire-size	On
Show wire-colour	On
Entities	
...	...

In the Attributes node you can change the visibility properties for the wire texts.

In the Segment Attributes node you can change the visibility properties of the currently selected wire segment.

A.1.4.e. CHANGING THE ATTRIBUTES OF MULTIPLE WIRES IN ONE STEP

In *SEE Electrical V6R1* has been implemented the possibility to change the wire colour, size, type and signal type.

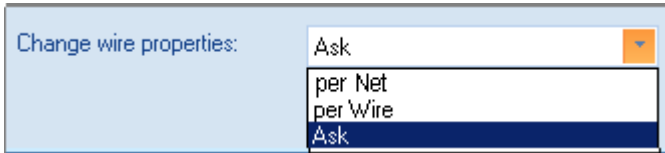
A.1.4.f. USER DEFINED WIRE COLOUR AND SIZE

A new Wire Defaults button has been added in the *Wires* tab of the *Circuit Diagrams Properties* window. It allows the user management of the wire colour and size attributes.

A.1.4.g. CHANGING THE WIRE SIZE AND COLOUR FOR ONE WIRE IN A NET

Standard

The **"Change wire properties"** option in the **Signal Type Setup** window defines the way the wire properties shall be changed.



The option contains three choices:

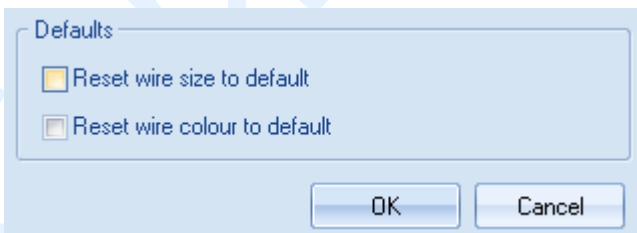
- ✓ **"Per Net"** – the changes in the wire properties affect the whole net
- ✓ **"Per Wire"** – the changes of the wire properties affect only the wire
- ✓ **"Ask"** – the user decides which wire properties to change.

A.1.4.h. DEFAULT WIRE SIZE AND DEFAULT WIRE COLOUR

Two new columns, available in the **Signal Type Setup** window: **"Default wire size"** and **"Default wire colour"**, allow the definition of the wire size and colour attributes when using the Signal Type wire logic. It is possible to define the properties for each signal type.

	Name of signal	For	Sta	Ste	Show potential	Format	Start	Step wire no.	Default wire size	Default wire colour	Sho
▶	Power1	#	1	1	<input type="checkbox"/>	#	1	1	1.5	BK	
	Control	#	1	1	<input type="checkbox"/>	#	1	1	1.5	BK	
	N	#	1	1	<input type="checkbox"/>	#	1	1	1.5	BU	
	PE	#	1	1	<input type="checkbox"/>	#	1	1	1.5	GN	
*			1	1	<input type="checkbox"/>		1	1	1.5	BK	

The modification is valid only for the wires drawn after the change in the **Signal type setup** window. You can apply the modification to the already drawn wires by using the **Electrical > Wires > Numbers > Generate** command.



A.1.4.i. NUMBERING OF THE SIGNAL TYPES

Standard

The **Global signal numbering** and **Global wire numbering** areas in the **Signal Type Setup** window define a rule for the generation of potential names and signal numbers.

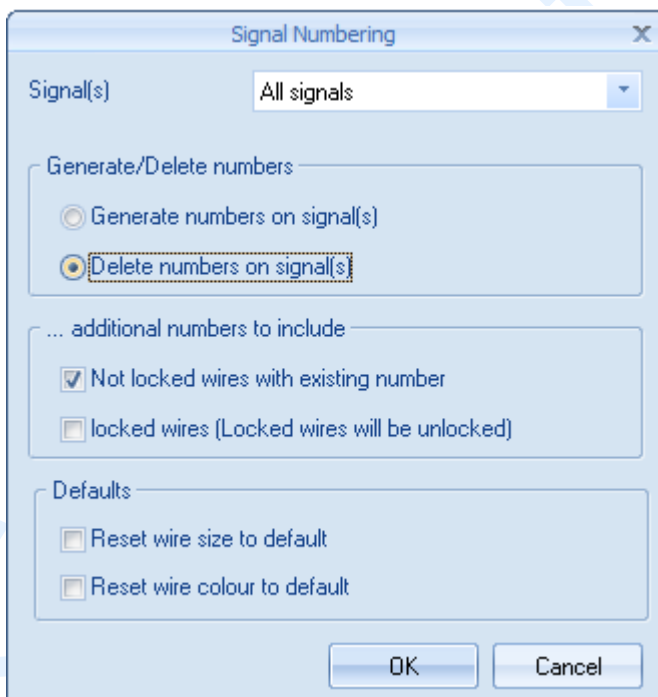


The values defined here prevail over the values defined for the single signal types.

A.1.4.j. RESETTING THE DEFAULT WIRE SIZE AND COLOUR

Standard

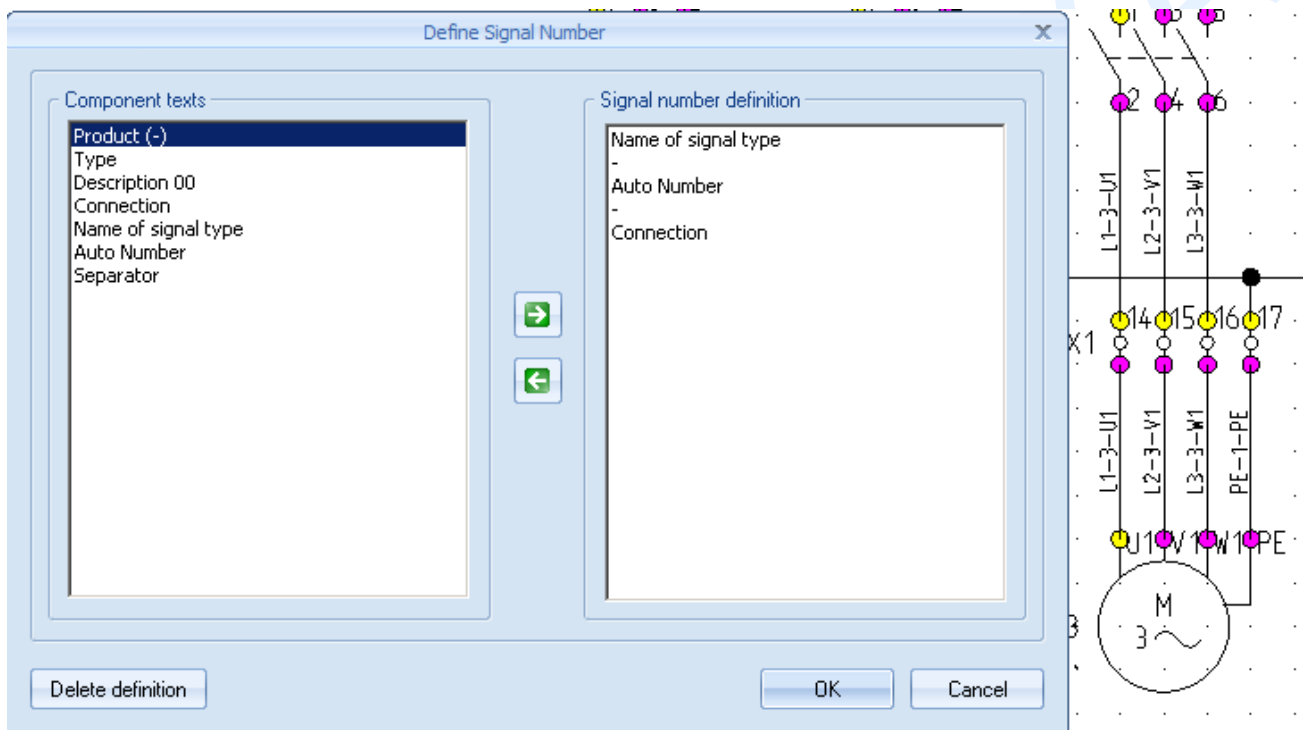
It is possible to roll back the changes made in the properties of the wires, or to add the new properties defined in the **Signal Type Setup** window to the already existing wires. This is possible in the **Signal Numbering** window accessible from the **Electrical > Wires > Numbers > Generate** command.



A.1.4.k. SPECIFIC POTENTIAL NAMES FOR CONNECTIONS TO MOTORS, PLC I/Os AND SENSORS

Advanced

The **Define Signal Number** command has been added to *SEE Electrical V6R1*. It defines the way of numbering of the signal connected to each connection. This is possible if the Signal Types for wires logic is activated in the **Circuit Diagrams Properties** window. The rules defined in the **Define Signal Number** window refer only to the selected symbol and are stored with it.



A.1.4.l. CONVERTOR FOR TRANSFERRING OLD POTENTIAL NUMBERS TO SIGNAL MANAGEMENT

Standard

To make it possible to use the full range of options given to you by the signal type management, a converter tool has been added to *SEE Electrical V6R1*. In this way you can convert the workspaces generated with the wire numbering to the signal type wire logic. The tool is accessible through the **WireNumToPotential** command in the **Commands** pane.

A.1.5. CABLES

A.1.5.a. AUTOMATIC GENERATION OF CABLE NAMES

It is possible now to define a component code for the cables. You can define the code in the "**Component code for automatic cable numbering**" field in the **Cables** tab of the **Circuit diagrams Properties** window. If a component is not inserted in the field, the cable names are defined manually.

A.1.5.b. COPYING AN EXISTING CABLE

Advanced

The new **Copy Ghost** command allows you to make a "ghost" copy of an existing cable core. The copy cannot be edited. The changes made to the original cable are transferred to the copy. If the original cable is deleted, the copy of the cable will show a "?" as a cable core and it has to be deleted manually.

A.1.5.c. AUTOMATIC EXTENSION OF USER DEFINED CABLE SYMBOLS

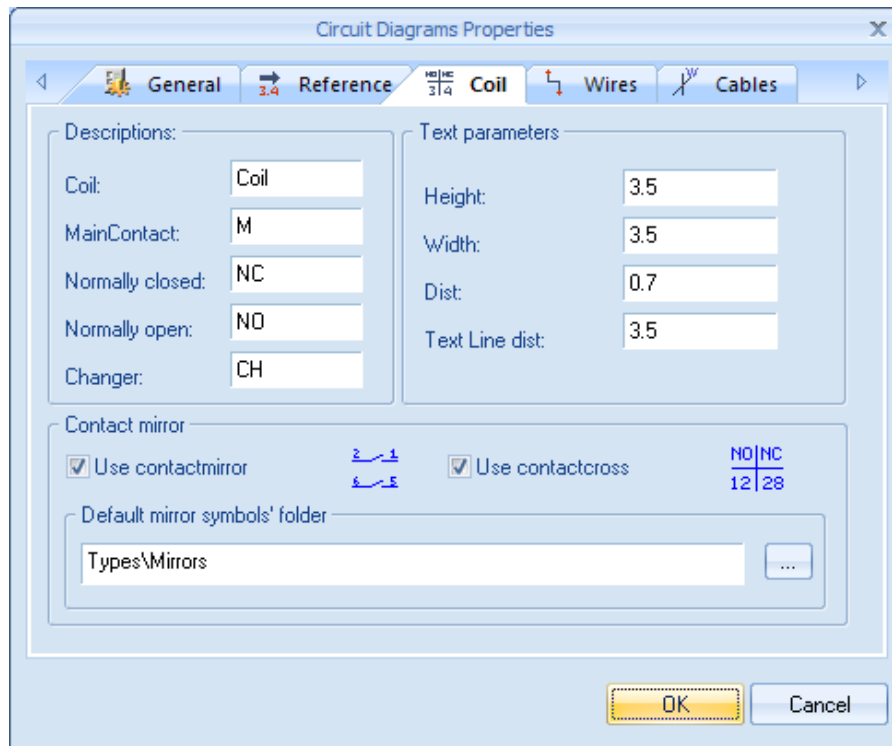
The start, middle and end cable symbols of a user defined symbol are extended automatically along the cable direction to cover eventual gaps between the wires.

A.1.5.d. AUTOMATIC GENERATION OF CROSS REFERENCE MIRRORS FOR COILS WITHOUT TYPE INFORMATION

Standard

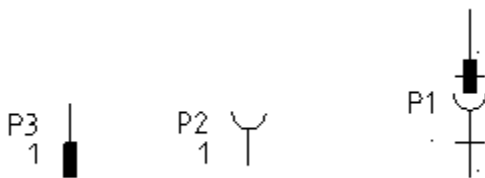
If no type has been defined for a coil or if inside the type has not been defined a channel definition, it is possible now to have a contact mirror under the coil.

A database and a symbol folder for the coils' mirror has to be defined in the **Coil** tab of the **Circuit diagrams Properties** window and the "**Use contactmirror**" check box has to be activated.

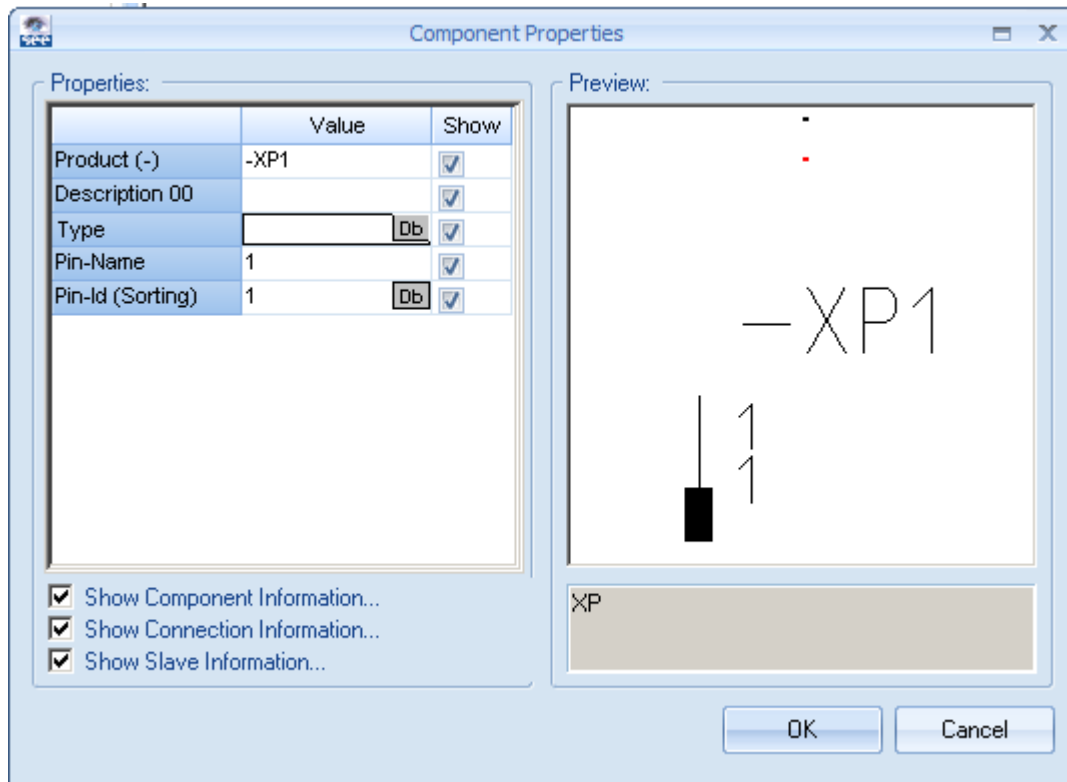


A.1.6. CONNECTORS

SEE Electrical V6R1 supports the management of connectors. A connector is a component that contains several pins. A connector has one entry in the part list, but its pins can be inserted in several places in the circuit diagrams. Connectors can be used at the end of a cable. Some connectors have female pins, other have male pins.



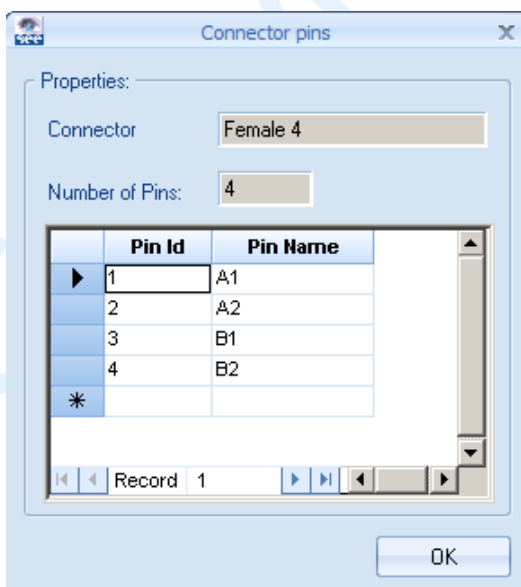
The "**Pin Name**" and "**Pin Id (Sorting)**" fields are available in the **Component Properties** dialogue in the **Circuit Diagrams** module.



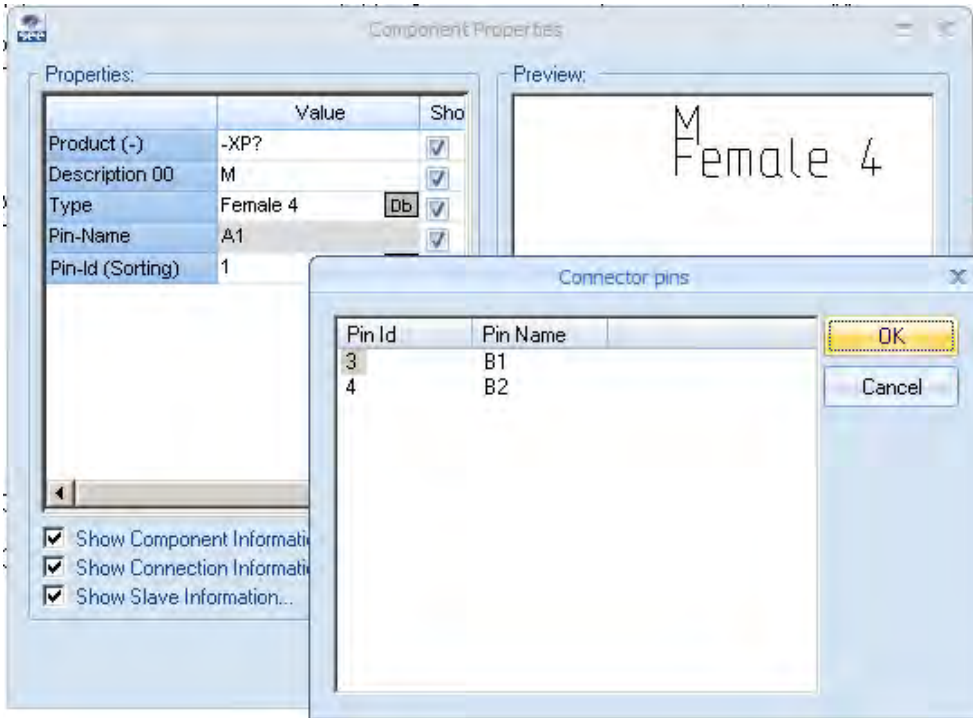
A.1.6.a. MANAGEMENT OF CONNECTORS THROUGH THE TYPE DATABASE

Standard

A new property – "**Pin Numbers**" has been added to the Type database and allows you to define the pin numbers present in a connector.



If the pin numbers are defined correctly, *SEE Electrical V6R1* automatically suggests the pin name and controls the overbooking. The pins have a specific sort order in the connector given by the manufacturer. If to the connector has been assigned type and pin information, it is possible to change the pins in the **Component Properties** dialogue.



A.1.7. IMPROVEMENTS IN THE DATABASE LISTS

A.1.7.a. CHANGING THE PAGE TEMPLATE IN THE DATABASE EDITORS (LISTS OF DOCUMENTS, DOCUMENTS EDITOR)

Advanced

The **Change page template** pop-up command has been added to the pop-up menu in the *View*, *Document* and *Editor*, *Document* database lists.

	Kind of Document	Page Function (=)	Page Location (+)	Page	Index	Page Created C
1	Circuit diagrams (EN)			1		22-10-00
2	Circuit diagrams (EN)			2		22-10-00
3	Circuit diagrams					
4	Products					
5	Terminals					
6	Terminals					
7	Terminals					
8	Cables					
9	Cable-cores					
10	Wires					
11	Wires					
12	Wires					
13	Wiring					
14	Wiring					
15	Parts, simple					

⚡ Set Filter On -> Kind of Document=Circuit diagrams (EN)

⚡ Set Filter On -> Kind of Document=?

A↕ Sort acceding on row -> Kind of Document

Z↕ Sort descending on row -> Kind of Document

✖ Remove Filter/Sort

🖨 Add to Printlist

🗑 Remove from Printlist

👉 Go to the Page

📄 Change page template

The command allows you to change the template for the selected page(s) directly from the database lists. If you change the template of multiple pages, the selected documents have to be of the same kind.

In the *Circuit Diagrams EN* module, a question appears if the new template has different number of paths than the new one. You can decide to rename the components according to the template.

In the *Circuit Diagrams IEEE* module you have to select a template with the same number and position of section as the old one.

Undo is not possible after the change of template.

A.1.7.b. NEW LIST FOR PLC I/Os FROM PLC CARD

Basic

A new database list - *View, PLC Card I/O* displays all I/Os defined on the PLC card. The list displays only the I/Os already inserted in the diagram.

Example 1-aspects: 0003		Example 1-aspects: 0001		DB Example 1-aspects: View, PLC Card-I/O				DB Example			
	Page Function (=)	Page	Index	Path	Function (=)	Location (+)	Product (-)	Connection	PLC address	To	Connection
1		3		1			D		I0.0		2
2		3		1			D		I0.0		0
3		3		1			D		I0.0		1
4		3		1			D		I0.1		0
5		3		1			D		I0.1		1
6		3		1			D		I0.1		2
7		3		1			D		I0.2		0
8		3		1			D		I0.2		1
9		3		1			D		I0.2		2
10		3		1			D		I0.2		2

A.1.7.c. NEW CONNECTOR LIST AND EDITOR

Advanced

The new database list displays the connectors and their pins. The *Editor, Connector* list allows you to change the information for the connectors and their pins. In the *Editor, Connectors* you can change the name and the type of the connectors and the Pin-ID. The name of the pin cannot be changed if it has been already defined in the channel definition of the type. If a type is assigned to a connector, the pin name is updated directly from the type information. Pin IDs (and pin names) can be changed if you select only one pin in the editor.

A.1.7.d. NEW EDITOR FOR POTENTIALS/SIGNALS

Basic

The *Editor, Signals* list is available now in the **Basic** level. In **Advanced** level you can select all potentials with the same name and change them in one step.

A.1.8. IMPROVEMENTS IN THE GRAPHICAL LISTS

A.1.8.a. OUTPUT MULTIPLE COLUMNS

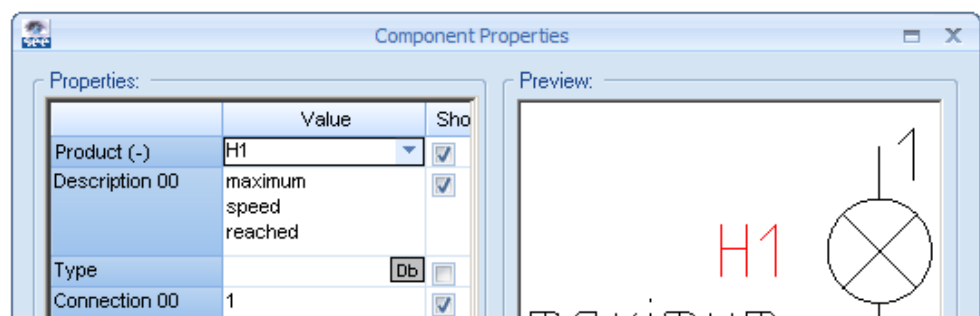
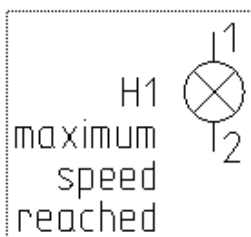
Basic

It is possible now to output more than one column in the following graphical lists: Documents list, Product list, Cable list, Cable wire list, Terminal list. In the Terminal Matrix and Terminal Plan lists as well as the Terminal Row Picture, Cable Plan and Products Assembly the option is not available.

A.1.8.b. OUTPUT MULTILINE TEXTS IN A SINGLE LINE

Basic

It is possible to display in one row in the lists a multiline text inserted in the drawing. In the Terminal Matrix and Terminal Plan lists as well as the Terminal Row Picture, Cable Plan and Products Assembly the option is not available. To display multiline texts in a single line the page templates must be changed.



A.1.8.c. CONTROLLING THE NUMBER OF DIGITS AND LENGTH OF TEXTS

Basic

The following formatting attributes have been introduced in *SEE Electrical V6R1* to allow the formatting of the information displayed in the graphical lists:

Numerical values

- ✓ Control number of decimal places
- ✓ Control decimal places and add static text

Text strings

- ✓ Control length

In the Terminal Matrix and Terminal Plan lists as well as the Terminal Row Picture, Cable Plan and Products Assembly the option is not available.

A.1.8.d. NEW CONNECTOR LIST AND CONNECTOR PINS LIST

Advanced

The Connectors and Connector pins graphical lists are available to generate lists of all connectors, or of each connector and its pins.

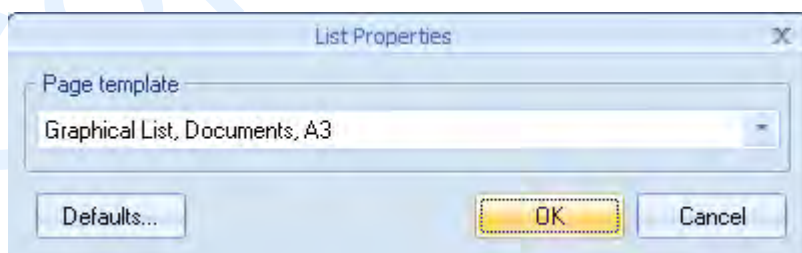
A.1.8.e. NEW ASPECTS FUNCTION AND ASPECTS LOCATION LISTS

Two new lists are available in the graphical lists. They allow you to generate graphical lists with functions/locations and their descriptions.

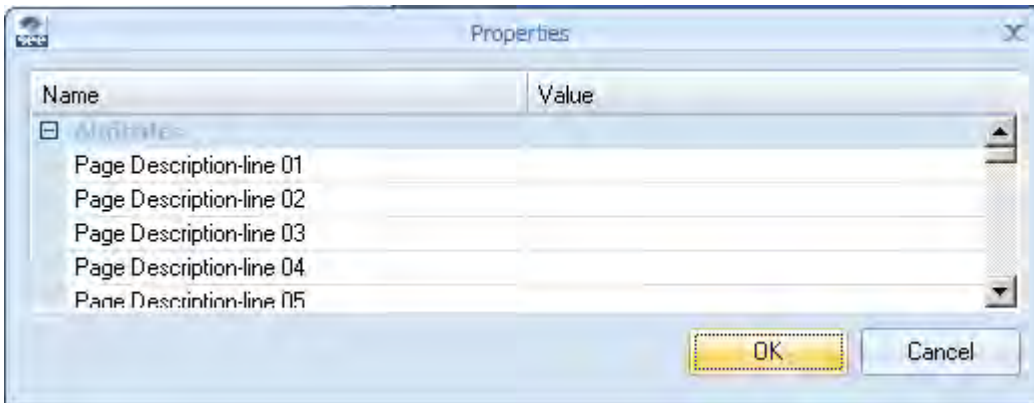
A.1.8.f. KEEP PAGE TEXTS

Basic

The **Defaults** button is available in the *List Properties* dialogue for all lists.



You can define the texts that will appear in the text attributes of the defined template. The Terminal Matrix, Terminal Plan, Terminal Row Picture use the "Page Description 01" texts.



A.1.8.g. MULTIPLE TERMINAL STRIPS PER PAGE IN THE TERMINAL MATRIX GRAPHICAL LIST

Standard

It is possible to display more than one terminal strip per page in the Terminal Matrix graphical list.

You have to define a specific template to be able to generate the list.

A.1.8.h. MULTIPLE TERMINAL STRIPS PER PAGE IN THE TERMINAL PLAN AND TERMINAL ROW PICTURE GRAPHICAL LISTS

Advanced

It is possible to display more than one terminal strip per page in the Terminal Plan and Terminal Row Picture graphical lists.
You have to define a specific template to be able to generate the list.

Terminal Matrix	Terminal Strip: X1	X2	X3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	<table border="1"> <thead> <tr> <th>Connec Point</th> <th>Term.</th> <th>No.</th> <th>Connec Point2</th> </tr> </thead> <tbody> <tr><td>SUPPLY1.1</td><td>0</td><td>1</td><td>0-32</td></tr> <tr><td>SUPPLY1.2</td><td>0</td><td>2</td><td>0-34</td></tr> <tr><td>SUPPLY1.3</td><td>0</td><td>3</td><td>0-36</td></tr> <tr><td>SUPPLY1.4</td><td>0</td><td>4</td><td>0-38</td></tr> <tr><td>SUPPLY1.5</td><td>0</td><td>5</td><td>0-40</td></tr> <tr><td>SUPPLY1.6</td><td>0</td><td>6</td><td>0-42</td></tr> <tr><td>SUPPLY1.7</td><td>0</td><td>7</td><td>0-44</td></tr> <tr><td>SUPPLY1.8</td><td>0</td><td>8</td><td>0-46</td></tr> <tr><td>SUPPLY1.9</td><td>0</td><td>9</td><td>0-48</td></tr> <tr><td>SUPPLY1.10</td><td>0</td><td>10</td><td>0-50</td></tr> <tr><td>SUPPLY1.11</td><td>0</td><td>11</td><td>0-52</td></tr> <tr><td>SUPPLY1.12</td><td>0</td><td>12</td><td>0-54</td></tr> <tr><td>SUPPLY1.13</td><td>0</td><td>13</td><td>0-56</td></tr> <tr><td>SUPPLY1.14</td><td>0</td><td>14</td><td>0-58</td></tr> <tr><td>SUPPLY1.15</td><td>0</td><td>15</td><td>0-60</td></tr> <tr><td>SUPPLY1.16</td><td>0</td><td>16</td><td>0-62</td></tr> <tr><td>SUPPLY1.17</td><td>0</td><td>17</td><td>0-64</td></tr> <tr><td>SUPPLY1.18</td><td>0</td><td>18</td><td>0-66</td></tr> <tr><td>SUPPLY1.19</td><td>0</td><td>19</td><td>0-68</td></tr> <tr><td>SUPPLY1.20</td><td>0</td><td>20</td><td>0-70</td></tr> <tr><td>SUPPLY1.21</td><td>0</td><td>21</td><td>0-72</td></tr> <tr><td>SUPPLY1.22</td><td>0</td><td>22</td><td>0-74</td></tr> <tr><td>SUPPLY1.23</td><td>0</td><td>23</td><td>0-76</td></tr> <tr><td>SUPPLY1.24</td><td>0</td><td>24</td><td>0-78</td></tr> <tr><td>SUPPLY1.25</td><td>0</td><td>25</td><td>0-80</td></tr> <tr><td>SUPPLY1.26</td><td>0</td><td>26</td><td>0-82</td></tr> <tr><td>SUPPLY1.27</td><td>0</td><td>27</td><td>0-84</td></tr> <tr><td>SUPPLY1.28</td><td>0</td><td>28</td><td>0-86</td></tr> <tr><td>SUPPLY1.29</td><td>0</td><td>29</td><td>0-88</td></tr> <tr><td>SUPPLY1.30</td><td>0</td><td>30</td><td>0-90</td></tr> <tr><td>SUPPLY1.31</td><td>0</td><td>31</td><td>0-92</td></tr> <tr><td>SUPPLY1.32</td><td>0</td><td>32</td><td>0-94</td></tr> <tr><td>SUPPLY1.33</td><td>0</td><td>33</td><td>0-96</td></tr> <tr><td>SUPPLY1.34</td><td>0</td><td>34</td><td>0-98</td></tr> <tr><td>SUPPLY1.35</td><td>0</td><td>35</td><td>0-100</td></tr> <tr><td>SUPPLY1.36</td><td>0</td><td>36</td><td>0-102</td></tr> <tr><td>SUPPLY1.37</td><td>0</td><td>37</td><td>0-104</td></tr> <tr><td>SUPPLY1.38</td><td>0</td><td>38</td><td>0-106</td></tr> <tr><td>SUPPLY1.39</td><td>0</td><td>39</td><td>0-108</td></tr> <tr><td>SUPPLY1.40</td><td>0</td><td>40</td><td>0-110</td></tr> <tr><td>SUPPLY1.41</td><td>0</td><td>41</td><td>0-112</td></tr> <tr><td>SUPPLY1.42</td><td>0</td><td>42</td><td>0-114</td></tr> <tr><td>SUPPLY1.43</td><td>0</td><td>43</td><td>0-116</td></tr> <tr><td>SUPPLY1.44</td><td>0</td><td>44</td><td>0-118</td></tr> <tr><td>SUPPLY1.45</td><td>0</td><td>45</td><td>0-120</td></tr> <tr><td>SUPPLY1.46</td><td>0</td><td>46</td><td>0-122</td></tr> <tr><td>SUPPLY1.47</td><td>0</td><td>47</td><td>0-124</td></tr> <tr><td>SUPPLY1.48</td><td>0</td><td>48</td><td>0-126</td></tr> <tr><td>SUPPLY1.49</td><td>0</td><td>49</td><td>0-128</td></tr> <tr><td>SUPPLY1.50</td><td>0</td><td>50</td><td>0-130</td></tr> <tr><td>SUPPLY1.51</td><td>0</td><td>51</td><td>0-132</td></tr> <tr><td>SUPPLY1.52</td><td>0</td><td>52</td><td>0-134</td></tr> <tr><td>SUPPLY1.53</td><td>0</td><td>53</td><td>0-136</td></tr> <tr><td>SUPPLY1.54</td><td>0</td><td>54</td><td>0-138</td></tr> <tr><td>SUPPLY1.55</td><td>0</td><td>55</td><td>0-140</td></tr> <tr><td>SUPPLY1.56</td><td>0</td><td>56</td><td>0-142</td></tr> <tr><td>SUPPLY1.57</td><td>0</td><td>57</td><td>0-144</td></tr> <tr><td>SUPPLY1.58</td><td>0</td><td>58</td><td>0-146</td></tr> <tr><td>SUPPLY1.59</td><td>0</td><td>59</td><td>0-148</td></tr> <tr><td>SUPPLY1.60</td><td>0</td><td>60</td><td>0-150</td></tr> <tr><td>SUPPLY1.61</td><td>0</td><td>61</td><td>0-152</td></tr> <tr><td>SUPPLY1.62</td><td>0</td><td>62</td><td>0-154</td></tr> <tr><td>SUPPLY1.63</td><td>0</td><td>63</td><td>0-156</td></tr> <tr><td>SUPPLY1.64</td><td>0</td><td>64</td><td>0-158</td></tr> <tr><td>SUPPLY1.65</td><td>0</td><td>65</td><td>0-160</td></tr> <tr><td>SUPPLY1.66</td><td>0</td><td>66</td><td>0-162</td></tr> <tr><td>SUPPLY1.67</td><td>0</td><td>67</td><td>0-164</td></tr> <tr><td>SUPPLY1.68</td><td>0</td><td>68</td><td>0-166</td></tr> <tr><td>SUPPLY1.69</td><td>0</td><td>69</td><td>0-168</td></tr> <tr><td>SUPPLY1.70</td><td>0</td><td>70</td><td>0-170</td></tr> <tr><td>SUPPLY1.71</td><td>0</td><td>71</td><td>0-172</td></tr> <tr><td>SUPPLY1.72</td><td>0</td><td>72</td><td>0-174</td></tr> <tr><td>SUPPLY1.73</td><td>0</td><td>73</td><td>0-176</td></tr> <tr><td>SUPPLY1.74</td><td>0</td><td>74</td><td>0-178</td></tr> <tr><td>SUPPLY1.75</td><td>0</td><td>75</td><td>0-180</td></tr> <tr><td>SUPPLY1.76</td><td>0</td><td>76</td><td>0-182</td></tr> <tr><td>SUPPLY1.77</td><td>0</td><td>77</td><td>0-184</td></tr> <tr><td>SUPPLY1.78</td><td>0</td><td>78</td><td>0-186</td></tr> <tr><td>SUPPLY1.79</td><td>0</td><td>79</td><td>0-188</td></tr> <tr><td>SUPPLY1.80</td><td>0</td><td>80</td><td>0-190</td></tr> <tr><td>SUPPLY1.81</td><td>0</td><td>81</td><td>0-192</td></tr> <tr><td>SUPPLY1.82</td><td>0</td><td>82</td><td>0-194</td></tr> <tr><td>SUPPLY1.83</td><td>0</td><td>83</td><td>0-196</td></tr> <tr><td>SUPPLY1.84</td><td>0</td><td>84</td><td>0-198</td></tr> <tr><td>SUPPLY1.85</td><td>0</td><td>85</td><td>0-200</td></tr> <tr><td>SUPPLY1.86</td><td>0</td><td>86</td><td>0-202</td></tr> <tr><td>SUPPLY1.87</td><td>0</td><td>87</td><td>0-204</td></tr> <tr><td>SUPPLY1.88</td><td>0</td><td>88</td><td>0-206</td></tr> <tr><td>SUPPLY1.89</td><td>0</td><td>89</td><td>0-208</td></tr> <tr><td>SUPPLY1.90</td><td>0</td><td>90</td><td>0-210</td></tr> <tr><td>SUPPLY1.91</td><td>0</td><td>91</td><td>0-212</td></tr> <tr><td>SUPPLY1.92</td><td>0</td><td>92</td><td>0-214</td></tr> <tr><td>SUPPLY1.93</td><td>0</td><td>93</td><td>0-216</td></tr> <tr><td>SUPPLY1.94</td><td>0</td><td>94</td><td>0-218</td></tr> <tr><td>SUPPLY1.95</td><td>0</td><td>95</td><td>0-220</td></tr> <tr><td>SUPPLY1.96</td><td>0</td><td>96</td><td>0-222</td></tr> <tr><td>SUPPLY1.97</td><td>0</td><td>97</td><td>0-224</td></tr> <tr><td>SUPPLY1.98</td><td>0</td><td>98</td><td>0-226</td></tr> <tr><td>SUPPLY1.99</td><td>0</td><td>99</td><td>0-228</td></tr> <tr><td>SUPPLY1.100</td><td>0</td><td>100</td><td>0-230</td></tr> </tbody> </table>	Connec Point	Term.	No.	Connec Point2	SUPPLY1.1	0	1	0-32	SUPPLY1.2	0	2	0-34	SUPPLY1.3	0	3	0-36	SUPPLY1.4	0	4	0-38	SUPPLY1.5	0	5	0-40	SUPPLY1.6	0	6	0-42	SUPPLY1.7	0	7	0-44	SUPPLY1.8	0	8	0-46	SUPPLY1.9	0	9	0-48	SUPPLY1.10	0	10	0-50	SUPPLY1.11	0	11	0-52	SUPPLY1.12	0	12	0-54	SUPPLY1.13	0	13	0-56	SUPPLY1.14	0	14	0-58	SUPPLY1.15	0	15	0-60	SUPPLY1.16	0	16	0-62	SUPPLY1.17	0	17	0-64	SUPPLY1.18	0	18	0-66	SUPPLY1.19	0	19	0-68	SUPPLY1.20	0	20	0-70	SUPPLY1.21	0	21	0-72	SUPPLY1.22	0	22	0-74	SUPPLY1.23	0	23	0-76	SUPPLY1.24	0	24	0-78	SUPPLY1.25	0	25	0-80	SUPPLY1.26	0	26	0-82	SUPPLY1.27	0	27	0-84	SUPPLY1.28	0	28	0-86	SUPPLY1.29	0	29	0-88	SUPPLY1.30	0	30	0-90	SUPPLY1.31	0	31	0-92	SUPPLY1.32	0	32	0-94	SUPPLY1.33	0	33	0-96	SUPPLY1.34	0	34	0-98	SUPPLY1.35	0	35	0-100	SUPPLY1.36	0	36	0-102	SUPPLY1.37	0	37	0-104	SUPPLY1.38	0	38	0-106	SUPPLY1.39	0	39	0-108	SUPPLY1.40	0	40	0-110	SUPPLY1.41	0	41	0-112	SUPPLY1.42	0	42	0-114	SUPPLY1.43	0	43	0-116	SUPPLY1.44	0	44	0-118	SUPPLY1.45	0	45	0-120	SUPPLY1.46	0	46	0-122	SUPPLY1.47	0	47	0-124	SUPPLY1.48	0	48	0-126	SUPPLY1.49	0	49	0-128	SUPPLY1.50	0	50	0-130	SUPPLY1.51	0	51	0-132	SUPPLY1.52	0	52	0-134	SUPPLY1.53	0	53	0-136	SUPPLY1.54	0	54	0-138	SUPPLY1.55	0	55	0-140	SUPPLY1.56	0	56	0-142	SUPPLY1.57	0	57	0-144	SUPPLY1.58	0	58	0-146	SUPPLY1.59	0	59	0-148	SUPPLY1.60	0	60	0-150	SUPPLY1.61	0	61	0-152	SUPPLY1.62	0	62	0-154	SUPPLY1.63	0	63	0-156	SUPPLY1.64	0	64	0-158	SUPPLY1.65	0	65	0-160	SUPPLY1.66	0	66	0-162	SUPPLY1.67	0	67	0-164	SUPPLY1.68	0	68	0-166	SUPPLY1.69	0	69	0-168	SUPPLY1.70	0	70	0-170	SUPPLY1.71	0	71	0-172	SUPPLY1.72	0	72	0-174	SUPPLY1.73	0	73	0-176	SUPPLY1.74	0	74	0-178	SUPPLY1.75	0	75	0-180	SUPPLY1.76	0	76	0-182	SUPPLY1.77	0	77	0-184	SUPPLY1.78	0	78	0-186	SUPPLY1.79	0	79	0-188	SUPPLY1.80	0	80	0-190	SUPPLY1.81	0	81	0-192	SUPPLY1.82	0	82	0-194	SUPPLY1.83	0	83	0-196	SUPPLY1.84	0	84	0-198	SUPPLY1.85	0	85	0-200	SUPPLY1.86	0	86	0-202	SUPPLY1.87	0	87	0-204	SUPPLY1.88	0	88	0-206	SUPPLY1.89	0	89	0-208	SUPPLY1.90	0	90	0-210	SUPPLY1.91	0	91	0-212	SUPPLY1.92	0	92	0-214	SUPPLY1.93	0	93	0-216	SUPPLY1.94	0	94	0-218	SUPPLY1.95	0	95	0-220	SUPPLY1.96	0	96	0-222	SUPPLY1.97	0	97	0-224	SUPPLY1.98	0	98	0-226	SUPPLY1.99	0	99	0-228	SUPPLY1.100	0	100	0-230	<table border="1"> <thead> <tr> <th>Connec Point</th> <th>Term.</th> <th>No.</th> <th>Connec Point2</th> </tr> </thead> <tbody> <tr><td>ES1</td><td>0</td><td>1</td><td>L3</td></tr> <tr><td>ES2</td><td>0</td><td>2</td><td>R2-51</td></tr> <tr><td>ES3</td><td>0</td><td>3</td><td>L3</td></tr> <tr><td>ES4</td><td>0</td><td>4</td><td>R1-51</td></tr> </tbody> </table>	Connec Point	Term.	No.	Connec Point2	ES1	0	1	L3	ES2	0	2	R2-51	ES3	0	3	L3	ES4	0	4	R1-51	<table border="1"> <thead> <tr> <th>Connec Point</th> <th>Term.</th> <th>No.</th> <th>Connec Point2</th> </tr> </thead> <tbody> <tr><td>RSU1</td><td>0</td><td>1</td><td>R3-2</td></tr> <tr><td>RSU2</td><td>0</td><td>2</td><td>R3-4</td></tr> <tr><td>RSU3</td><td>0</td><td>3</td><td>R3-6</td></tr> <tr><td>RSU4</td><td>0</td><td>4</td><td>R3-8</td></tr> <tr><td>RSU5</td><td>0</td><td>5</td><td>R3-10</td></tr> <tr><td>RSU6</td><td>0</td><td>6</td><td>R3-12</td></tr> <tr><td>RSU7</td><td>0</td><td>7</td><td>R3-14</td></tr> <tr><td>RSU8</td><td>0</td><td>8</td><td>R3-16</td></tr> <tr><td>RSU9</td><td>0</td><td>9</td><td>R3-18</td></tr> <tr><td>RSU10</td><td>0</td><td>10</td><td>R3-20</td></tr> </tbody> </table>	Connec Point	Term.	No.	Connec Point2	RSU1	0	1	R3-2	RSU2	0	2	R3-4	RSU3	0	3	R3-6	RSU4	0	4	R3-8	RSU5	0	5	R3-10	RSU6	0	6	R3-12	RSU7	0	7	R3-14	RSU8	0	8	R3-16	RSU9	0	9	R3-18	RSU10	0	10	R3-20
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SUPPLY1.82	0	82	0-194																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SUPPLY1.83	0	83	0-196																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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SUPPLY1.96	0	96	0-222																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SUPPLY1.97	0	97	0-224																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SUPPLY1.98	0	98	0-226																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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A.1.9. IMPROVEMENTS IN THE CABINETS MODULE

A.1.9.a. INSERTING SEVERAL TYPES ATTACHED TO ONE COMPONENT

If to a component is added more than one type, it is possible to insert cabinet symbols for all types. For this purpose you have to define in the channel definition in the "**Cabinet symbol**" field, the symbol for the cabinet or the size of the rectangle/circle that has to be generated.

If a component has multiple types and the cabinet symbol or dimension in the channel definition has been defined for more than one of the types, all symbols/rectangles for the component can be inserted in the cabinet.

If you use symbols for the cabinet, they have to possess as much connection points as defined in the channel definition.

A.1.9.b. HIDING COMPONENT NAMES

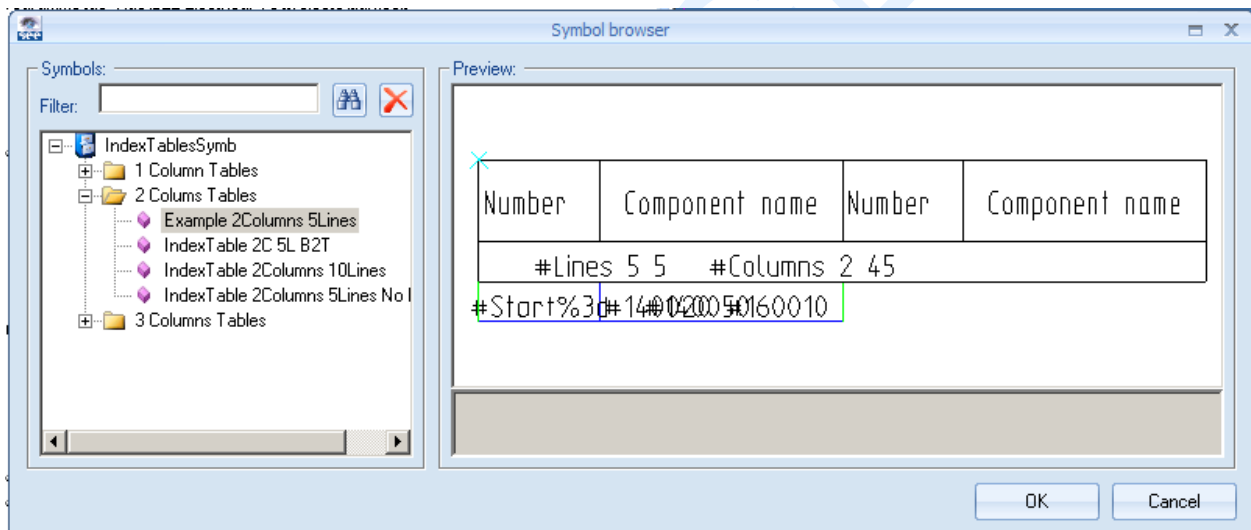
The component name is hidden if you press the H key of the keyboard while inserting symbols in the drawings.

A.1.9.c. SCALING THE CABINET SYMBOL TO A DEFINED SIZE

It is possible now to scale symbols for cabinets. You can define a general symbol that is stretched to the dimensions defined for the type. For this purpose three new values have been introduced in *SEE Electrical V6R1*: "**Cabinet Dimension X**", "**Cabinet Dimension Y**" and "**Cabinet Dimension Z**". The symbol defined in "**Symbol Cabinets**" is scaled to the values inserted in those fields.

A.1.9.d. ENHANCEMENT IN THE INDEX COMMAND

The templates for the indexes can be defined by the user. A new symbol library - *IndexTableSymb ses*, contains the index templates symbols. When you activate the command, the window displays all available templates.



An error message appears if the number of components exceeds the number of the places available in the template.

If an index is already present in the drawing, the Index components command updates the existing symbol.

A.1.10. NEW EXCEL IMPORT/EXPORT MODULE

The **DBListsToExcel** and **DBListsFromExcel** commands, available in the **Commands** pane, support the *Excel Import/Export* process.

Multiple database lists can be exported to *Microsoft Excel* in one step. Some defined lists like document list, product list, terminal list, wire list, cable list, cable core list and PLC list can be modified in *Excel* and imported again in *SEE Electrical*. The new module can be used in all levels of *SEE Electrical*.