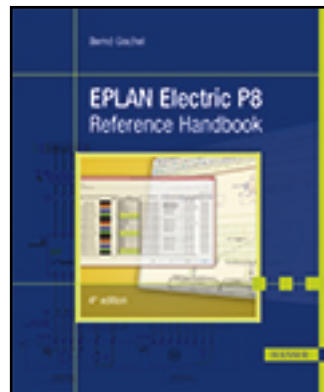


# HANSER



Sample Pages

Bernd Gischel

EPLAN Electric P8 Reference Handbook

Book ISBN: 978-1-56990-498-5

eBook ISBN: 978-1-56990-499-2

**For further information and order see**

<http://www.hanser-fachbuch.de/978-1-56990-498-5>

or contact your bookseller.

# Contents

<b>Preface</b> .....	XIII
<b>1 Installing EPLAN Electric P8</b> .....	1
1.1 Hardware .....	1
1.2 Installation .....	2
1.3 Note for users of previous versions .....	10
1.3.1 Parallel operation with previous versions .....	10
<b>2 The basics of the system</b> .....	11
2.1 Five principles for working with EPLAN Electric P8 .....	11
2.2 Directory structure, storage locations .....	13
2.3 Settings – General .....	17
2.3.1 Settings – Project .....	18
2.3.2 Settings – User .....	34
2.3.3 Settings – Station .....	41
2.3.4 Settings – Company .....	41
2.4 EPLAN and multiple starts? .....	43
2.5 Properties .....	43
2.5.1 Project properties .....	45
2.5.2 Page properties .....	47
2.5.3 User-defined properties .....	48
2.5.4 Symbol properties (components) .....	52
2.5.5 Form properties .....	53
2.5.6 Plot frame properties .....	53
2.6 Buttons and popup menus .....	53
2.6.1 Device dialog buttons .....	54
2.6.2 Buttons in dialogs (configuring) .....	54

2.6.3	Buttons in dialogs such as filter schemes .....	55
2.6.4	Restore default function .....	56
2.6.5	Property arrangements (components) .....	56
2.6.6	Format properties .....	58
2.6.7	Buttons (small black triangles) .....	59
2.6.8	Dialogs for schemes .....	59
<b>2.7</b>	<b>Master data</b> .....	60
<b>2.8</b>	<b>Operation</b> .....	61
2.8.1	Using the keyboard .....	61
2.8.2	Using the mouse .....	63
<b>2.9</b>	<b>User interface – more useful information</b> .....	63
2.9.1	Using workspaces .....	63
2.9.2	Dialog display .....	64
<b>3</b>	<b>Projects</b> .....	69
<b>3.1</b>	<b>Project types</b> .....	70
3.1.1	Project types in EPLAN .....	71
3.1.2	Project templates and basic projects .....	72
<b>3.2</b>	<b>Creating a new project</b> .....	74
3.2.1	New project (from a basic project) .....	74
<b>4</b>	<b>The graphical editor (GED)</b> .....	79
<b>4.1</b>	<b>Page navigator</b> .....	79
4.1.1	Page types .....	81
4.1.2	The popup menu in the page navigator .....	84
4.1.3	Page navigator filter .....	103
4.1.4	Edit in table .....	105
4.1.5	List with preselection .....	107
<b>4.2</b>	<b>General functions</b> .....	108
4.2.1	Title bar .....	108
4.2.2	Status bar .....	109
<b>4.3</b>	<b>Coordinate systems</b> .....	110
4.3.1	Graphical coordinate system .....	110
4.3.2	Logical coordinate system .....	111
4.3.3	Fluid power and process-engineering coordinate systems .....	111
4.3.4	3D coordinate systems .....	111
<b>4.4</b>	<b>Grid</b> .....	112
<b>4.5</b>	<b>Increments, coordinate input</b> .....	113
4.5.1	Increment .....	113
4.5.2	Coordinate input .....	114
4.5.3	Relative coordinate input .....	115
4.5.4	Move base point .....	115

<b>4.6</b>	<b>Graphical editing functions</b> .....	116
4.6.1	Graphical objects: lines, circles, rectangles .....	117
4.6.2	Trim, chamfer, stretch and more .....	119
4.6.3	Group and ungroup .....	127
4.6.4	Copy, move, delete .....	128
4.6.5	Dimensioning .....	129
<b>4.7</b>	<b>Texts</b> .....	132
4.7.1	Normal (free) texts .....	133
4.7.2	Path function texts .....	134
4.7.3	Special texts .....	136
4.7.4	Properties – Text dialog .....	139
<b>4.8</b>	<b>Components (symbols)</b> .....	145
4.8.1	Insert components (symbols) .....	145
4.8.2	Properties (components) dialog – [device] tab .....	147
4.8.3	Display tab .....	148
4.8.4	Symbol/function data tab .....	150
4.8.5	Parts tab .....	153
<b>4.9</b>	<b>Cross-references</b> .....	154
4.9.1	Contact image on component .....	154
4.9.2	Contact image in path .....	157
4.9.3	Special feature: Pair cross-reference .....	159
4.9.4	Contact image distributed device list .....	162
<b>4.10</b>	<b>Device selection settings</b> .....	164
<b>5</b>	<b>Navigators</b> .....	165
<b>5.1</b>	<b>Overview of the most important navigators</b> .....	166
5.1.1	Additional navigators and modules .....	171
5.1.2	General navigator functions .....	174
<b>5.2</b>	<b>Device navigator</b> .....	174
5.2.1	Swap .....	176
5.2.2	Assign main function .....	176
5.2.3	Synchronize function texts .....	179
5.2.4	Numbering (Number DT) .....	180
5.2.5	Device protection .....	186
5.2.6	Import (device data) .....	187
5.2.7	New .....	190
5.2.8	New functions .....	192
5.2.9	New device .....	193
<b>5.3</b>	<b>Terminal strip navigator</b> .....	195
5.3.1	Edit (terminal editor) .....	195
5.3.2	Generate multi-level terminal .....	200
5.3.3	Number terminals .....	201

5.3.4	New .....	205
5.3.5	New functions .....	206
5.3.6	New terminals (devices) .....	207
5.3.7	View .....	210
<b>5.4</b>	<b>Plug (female pin) navigator</b> .....	<b>212</b>
5.4.1	Edit (plug/female pin editor) .....	212
5.4.2	Number pins .....	213
5.4.3	New .....	213
5.4.4	New functions .....	214
5.4.5	Generate plug definition (plug and/or female pin) .....	214
5.4.6	Generate pin (plug and/or female pin) .....	215
<b>5.5</b>	<b>Cable navigator</b> .....	<b>217</b>
5.5.1	Edit .....	217
5.5.2	Number (cable DT) .....	219
5.5.3	Automatic cable selection .....	221
5.5.4	Generate cables automatically .....	223
5.5.5	Assign cable connections .....	226
5.5.6	New .....	228
5.5.7	Number DT .....	229
<b>5.6</b>	<b>PLC navigator</b> .....	<b>231</b>
5.6.1	Write back connection point descriptions .....	233
5.6.2	Set data types .....	235
5.6.3	Export/Import data .....	235
5.6.4	Addresses/assignment lists .....	236
5.6.5	Address .....	239
5.6.6	New .....	241
5.6.7	New functions .....	242
5.6.8	New device .....	244
5.6.9	View .....	244
<b>5.7</b>	<b>Part navigator (Devices/Parts)</b> .....	<b>246</b>
5.7.1	Add project part .....	247
5.7.2	Add part .....	249
5.7.3	Insert device .....	249
5.7.4	Exchange part .....	250
5.7.5	Edit part .....	251
5.7.6	Device selection .....	251
5.7.7	Assign item number .....	252
5.7.8	Synchronize parts data .....	253
5.7.9	Export/Import .....	253
5.7.10	View .....	253
<b>5.8</b>	<b>Macro navigator</b> .....	<b>255</b>
5.8.1	Macros – a general description .....	255
5.8.2	Macro project .....	255

5.8.3	Macro box .....	256
5.8.4	Macro navigator/Generate automatically .....	264
5.8.5	Macros in general (without macro project) .....	268
5.8.6	Macros with value sets (without macro project) .....	272
<b>5.9</b>	<b>Navigators – general functions</b> .....	<b>281</b>
5.9.1	Place from navigators .....	281
5.9.2	Assign from navigators .....	284
5.9.3	Filters .....	285
<b>5.10</b>	<b>Correction functions</b> .....	<b>287</b>
<b>6</b>	<b>Reports</b> .....	<b>289</b>
<b>6.1</b>	<b>What are reports?</b> .....	<b>290</b>
<b>6.2</b>	<b>Report types</b> .....	<b>290</b>
<b>6.3</b>	<b>Types of graphical reports</b> .....	<b>291</b>
6.3.1	Report types (forms) .....	291
6.3.2	Special connection diagrams .....	310
6.3.3	Next forms .....	312
6.3.4	Conditional forms .....	315
<b>6.4</b>	<b>Settings (output options)</b> .....	<b>317</b>
6.4.1	The Display/output project setting .....	318
6.4.2	The Parts project setting .....	319
6.4.3	The Output to pages project setting .....	321
<b>6.5</b>	<b>Generate reports</b> .....	<b>333</b>
6.5.1	Reports dialog .....	333
6.5.2	Generate reports without templates .....	335
6.5.3	Popup menus in the Reports tab .....	345
6.5.4	Generate reports with templates .....	346
<b>6.6</b>	<b>Other functions</b> .....	<b>354</b>
6.6.1	Update .....	354
6.6.2	Generate project reports .....	355
6.6.3	Generate report project .....	355
6.6.4	Settings for automatic updates .....	355
<b>6.7</b>	<b>Labeling</b> .....	<b>356</b>
6.7.1	Settings .....	356
<b>6.8</b>	<b>Edit properties externally</b> .....	<b>365</b>
6.8.1	Export data .....	366
6.8.2	Import data .....	373

<b>7</b>	<b>Management tasks in EPLAN</b> .....	375
7.1	<b>Structure identifier management</b> .....	375
7.1.1	List of identifiers in structure identifier management .....	379
7.1.2	Graphical buttons .....	381
7.1.3	Sort menu .....	383
7.1.4	Extras menu .....	384
7.1.5	Configure protection (protect identifiers from changes) .....	386
7.2	<b>Message management</b> .....	388
7.2.1	The visual appearance of message management .....	389
7.2.2	Project checks .....	390
7.2.3	Message classes and message categories .....	391
7.2.4	Filters in message management .....	399
7.2.5	Various message edition options .....	401
7.3	<b>Layer management</b> .....	404
7.3.1	Standard layers .....	405
7.3.2	Export and import of layers .....	405
7.3.3	Create and delete your own layers .....	406
7.3.4	Uses of layers .....	408
7.4	<b>Parts management</b> .....	411
7.4.1	Structure of parts management .....	413
7.4.2	Tabs in parts management .....	413
7.5	<b>Revision control</b> .....	423
7.5.1	General .....	423
7.5.2	Generate new revision .....	424
7.5.3	Execute changes .....	425
7.5.4	Complete page(s) .....	429
7.5.5	Generate reports .....	431
7.5.6	Complete a project .....	432
7.6	<b>Project management</b> .....	434
7.6.1	Project management dialog .....	434
7.6.2	Project management buttons .....	436
7.6.3	Project management filters .....	441
7.6.4	Create projects (project management) .....	442
<b>8</b>	<b>Export, import, print</b> .....	445
8.1	<b>Export and import of DXF/DWG files</b> .....	446
8.1.1	Exporting DXF and DWG files .....	446
8.1.2	Import of DXF and DWG files .....	451
8.2	<b>Image files</b> .....	456
8.2.1	Exporting image files .....	456
8.2.2	Insert image files (import) .....	459

<b>8.3</b>	<b>Print</b> .....	463
8.3.1	The Print dialog and its options .....	463
8.3.2	Important export/print setting .....	466
<b>8.4</b>	<b>Export and import of projects</b> .....	466
8.4.1	Exporting projects .....	467
8.4.2	Importing projects .....	467
<b>8.5</b>	<b>Print attached documents</b> .....	468
<b>8.6</b>	<b>Import PDF comments</b> .....	469
8.6.1	Importing commented PDF documents .....	470
8.6.2	Deleting PDF comments .....	473
<b>8.7</b>	<b>Generate PDF documents</b> .....	475
8.7.1	Export of PDF files .....	476
<b>9</b>	<b>Data backup</b> .....	485
<b>9.1</b>	<b>Zippping and unzipping of projects</b> .....	486
9.1.1	Zip projects .....	486
9.1.2	Unzip projects .....	488
<b>9.2</b>	<b>Backing up and restoring projects</b> .....	489
9.2.1	Back up projects .....	489
9.2.2	Restore projects .....	495
<b>9.3</b>	<b>Other important settings</b> .....	498
9.3.1	Default settings for project backup (global user setting) .....	498
9.3.2	Compress project (remove unnecessary data) .....	499
9.3.3	Automated processing of a project .....	501
<b>9.4</b>	<b>Backing up and restoring master data</b> .....	505
9.4.1	Backing up master data .....	505
9.4.2	Restoring master data .....	507
<b>9.5</b>	<b>Send project by e-mail directly</b> .....	509
<b>10</b>	<b>Master data editors</b> .....	511
<b>10.1</b>	<b>Preparatory measures</b> .....	514
<b>10.2</b>	<b>Clear overview of forms</b> .....	514
10.2.1	First option – manual overview .....	514
10.2.2	Second option – automatic overview .....	517
<b>10.3</b>	<b>Forms</b> .....	519
10.3.1	Create new form (from copy) .....	522
10.3.2	Edit existing form .....	529
10.3.3	Create new form .....	529
<b>10.4</b>	<b>Plot frames</b> .....	531
10.4.1	Create new plot frame (from copy) .....	531
10.4.2	Edit existing plot frame .....	534
10.4.3	Create new plot frame .....	535

<b>11</b>	<b>Old EPLAN data (EPLAN 5)</b> .....	537
11.1	Import options .....	538
<b>12</b>	<b>Extensions</b> .....	541
12.1	<b>EPLAN Data Portal</b> .....	541
12.1.1	What are the advantages of the EPLAN Data Portal? .....	541
12.1.2	Before the first start .....	542
12.1.3	How the EPLAN Data Portal works .....	545
12.2	<b>Project options</b> .....	553
12.2.1	What are project options? .....	553
12.2.2	Terminology in the Project options module .....	553
12.2.3	Creating options and sections .....	554
12.2.4	Generate options overview report .....	563
<b>13</b>	<b>FAQs</b> .....	565
13.1	<b>General</b> .....	566
13.2	<b>Parts</b> .....	599
13.3	<b>Terminals, plugs</b> .....	606
13.4	<b>Cables</b> .....	610
13.5	<b>Properties, layers</b> .....	611
13.5.1	Master data .....	615
13.6	<b>Data exchange</b> .....	622
13.7	<b>Reports</b> .....	624
<b>14</b>	<b>Creating a schematic project – step by step</b> .....	627
14.1	<b>Create a project</b> .....	627
14.2	<b>Generate pages</b> .....	630
14.3	<b>Create a schematic</b> .....	634
14.3.1	Insert symbols .....	635
14.3.2	Insert cables .....	640
14.3.3	Add texts .....	643
14.4	<b>Generate reports</b> .....	645
14.4.1	Generating other report pages .....	648
	<b>Index</b> .....	649

# Preface

Dear Users,

EPLAN Electric P8 is CAE software that is constantly being further developed. It offers innumerable project editing options and provides new innovations with each new version.

Version 2.5 is the result of continual development of previous versions. This version once again incorporates a wide range of user requirements and requests that have arisen during the practical use of EPLAN.

This fourth edition of this book has been revised and expanded based on Version 2.5 to demonstrate the wide range of functions in EPLAN Electric P8. The book is meant to make it easier to start using the software and to smoothly guide you around initial hiccups when working with EPLAN Electric P8. Numerous practical examples show you what is possible with Version 2.5.

Of course, like its predecessors, this edition cannot and will not describe all of the software's functions or provide examples for every conceivable function. EPLAN Electric P8 becomes increasingly comprehensive with every new version, as it does with this one, and it offers a variety of functions that cannot be completely covered in a single book. A book that describes all the functions would have thousands of pages and be impractical for the reader.

In Version 2.5, there are also many ways to reach the same goal. I will present and discuss some solutions. Others you will discover yourself and ask yourself why no one has ever tried it this or that way before.

This book will recommend solution approaches and demonstrate solutions that will help simplify your everyday work. It will help you make necessary decisions.

The book is addressed to everyone who uses EPLAN Electric P8 for electrical engineering designs – both daily and sporadic EPLAN Electric P8 users as well as engineers, electrical engineers, pupils and students.



I would like to express my thanks to Julia Stepp and her team at the Carl Hanser Verlag for the opportunity to write and publish this book. I would also like to sincerely thank my family, especially my wife Susanne. They have always been, and continue to be, very patient with me.

I would also like to thank all of the readers who have made this book a success. All feedback, whether criticism or praise, has always been a strong motivator for me to revise this book.

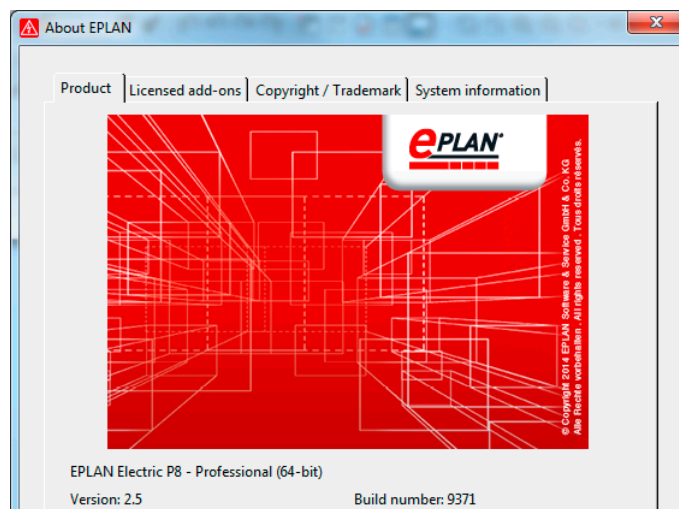
And finally, I would again like to thank EPLAN Software & Service GmbH & Co. KG for their consistent and very friendly support and collaboration in compiling some of the information for this edition of the EPLAN Electric P8 Reference Handbook.

### Important notes

All of the examples and explanations assume local installation and local operation of EPLAN. Furthermore, the book assumes that the user has all of the user rights in EPLAN and is logged in as the local administrator.

It is possible that, depending on the user's license and module package, certain functionality or a certain function described in the book will not be available or executable in the way in which it is explained and illustrated. Therefore, you should always check to see which licensed add-ons you have (via **HELP / ABOUT / LICENSED ADD-ONS TAB**).

For this book, EPLAN Electric P8 Professional Edition 2.5 was used.



Help / Info / Product tab



**NOTE** for users of previous versions: Certain parts of the functions described here may exist in EPLAN Electric P8 Versions 1.7 to 1.9 and 2.0 to 2.4, but their use, settings and range of functionality may differ from the current Version 2.5.



The examples used in the book are available as an EPLAN Electric P8 project at [www.eplan-efficient-engineering.com/handbook](http://www.eplan-efficient-engineering.com/handbook).

Some of the settings used in this book, such as those for filters or schemes, differ from the standard EPLAN installation. All of this additional data is available in the sample data. In addition, some custom, non-standard shortcut keys were also used.

The following text boxes are used to visually highlight notes, tips, etc.



**NOTE:** This box contains important notes that should be observed when using EPLAN Electric P8.



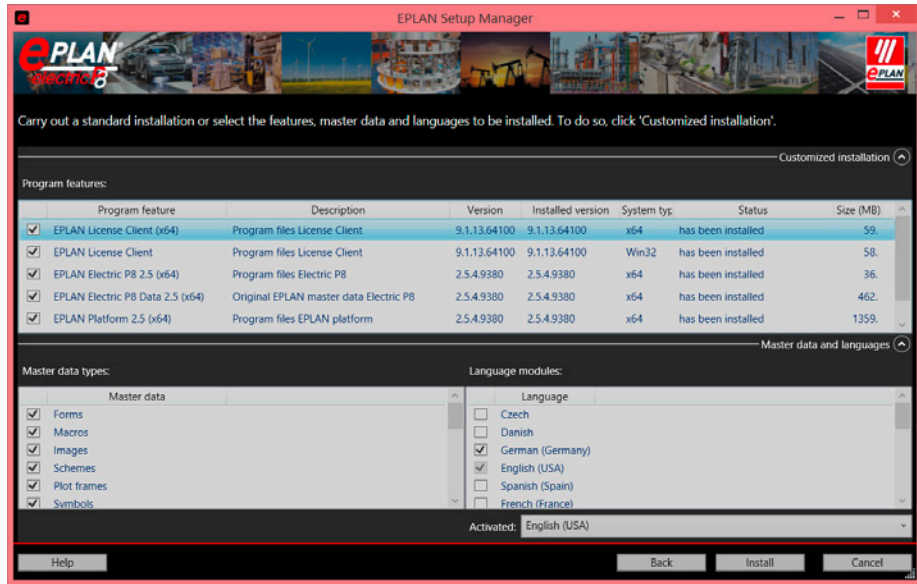
**TIP:** This box contains helpful tips for everyday working with EPLAN Electric P8.



This box provides additional information and tips.

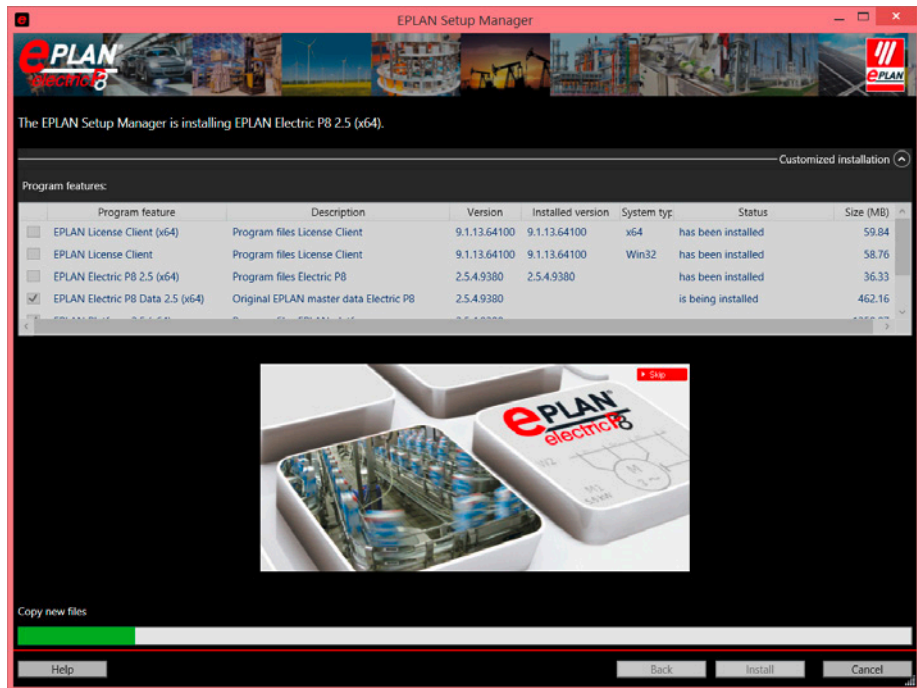
Whenever this symbol appears in the book's margin, you will find questions and answers to problems that occurred during actual use of EPLAN Electric P8.





**Fig. 1.5**  
Scope of components  
to be installed

After you set all the required information and click **INSTALL**, the Windows Installer prepares the required components and the actual installation begins.



**Fig. 1.6**  
EPLAN being installed



**NOTE:** EPLAN does not replace your system master data. If you would like to work with EPLAN's new system master data at a later date, then you must synchronize this data.

By design, EPLAN does not overwrite user-related master data because the user may have modified the original system master data and saved this under the original name assigned by EPLAN. During installation, EPLAN does not recognize whether this data has been changed on purpose and would therefore simply replace it. Usually the user does not want this to happen.

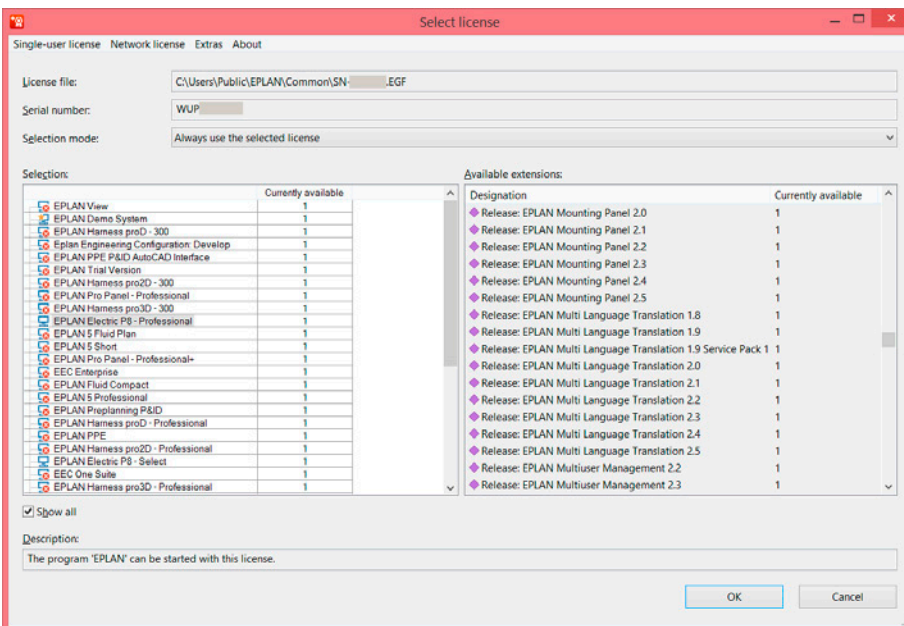
Once installation is complete, EPLAN displays the completion dialog. Here, you have to click **FINISH**. Installation of EPLAN Electric P8 is now complete.



**Fig. 1.7**  
Finishing the installation

EPLAN Electric P8 can now be started from the Start menu or the desktop icon.

If a license has not yet been installed, a dialog prompting or requesting a selection of the appropriate license is displayed before the program starts.



**Fig. 1.8**  
Select License dialog

- **Pages:** Defines the handling of pages. What combinations of letters and page names are allowed for subpages? How should paths be numbered: by page, by project or by structure identifier? The most important parameter in these settings is the definition or (subsequent) changing of the global plot frame for the project. A separate plot frame can be defined for every page in the page properties independently of the global plot frame setting. The page settings always have priority over the global project settings.
- **Symbol libraries:** Defines the symbol libraries used in this project. New entries (addition) of symbol libraries are automatically stored in the project after the setting is saved.

### 2.3.1.9 Setting Projects [project name]/Translation

This setting defines the databases to be used for translation or the scope of translation that EPLAN should use.

- **General:** This is where you enter project language settings, settings defining the handling of texts when translating during data entry. Settings for displaying translation languages (displaying translations in the project) are also configured here. You also have to define a source language here.

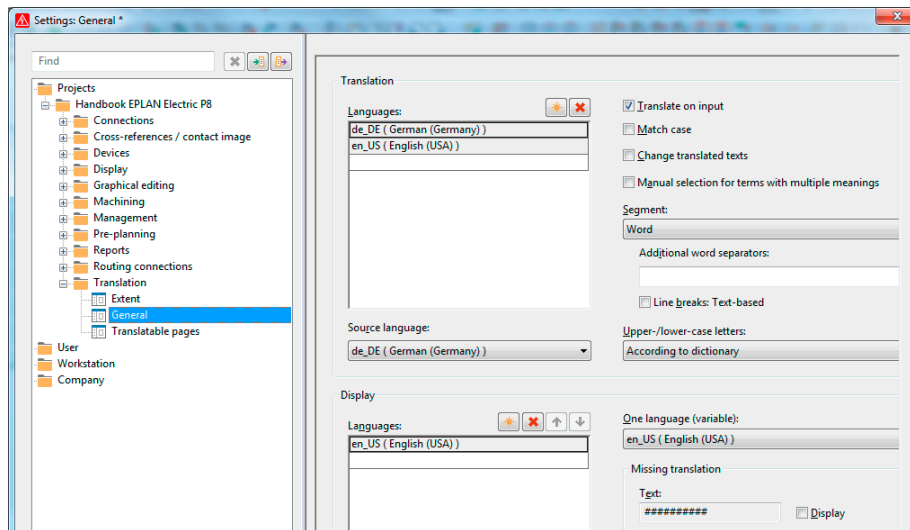
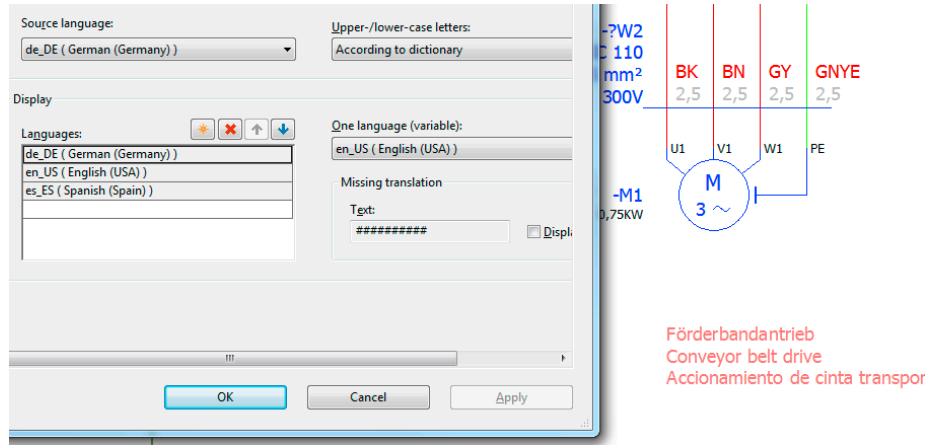


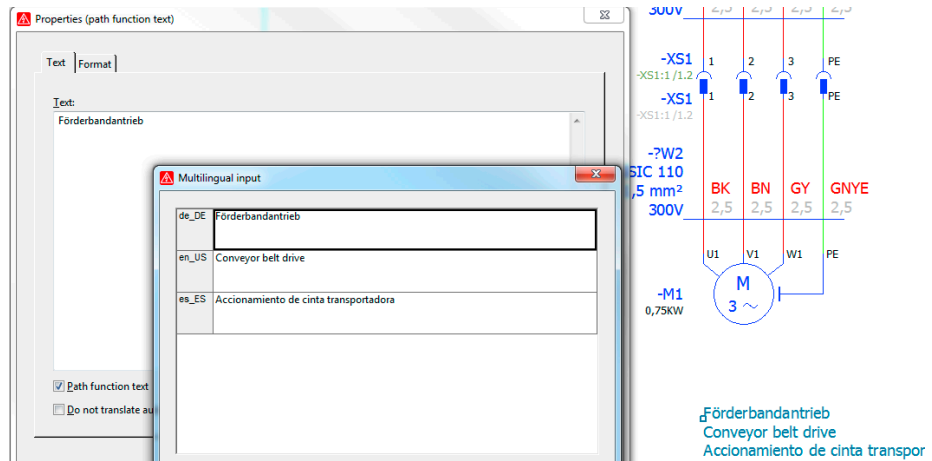
Fig. 2.25 Translation

- The definition of a **source language** is crucial, because this is the **first** language EPLAN displays in the various dialog boxes. This helps to prevent operating errors, e.g. entering English in the wrong “language line” by mistake.



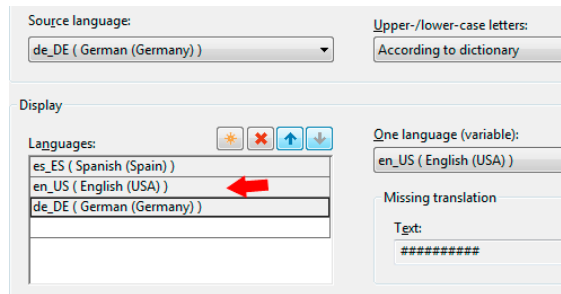


**Fig. 2.26**  
Setting the translation sequence to “English, German, Spanish”





**Fig. 2.27**  
Display in graphical editing

If the sequence of the *displayed languages* is changed in the settings, the *source language* will still be shown first in the dialogs.



**Fig. 2.28**  
Changing the translation sequence to “Spanish, English, German”

- **Storage location** selection field: Specifies the storage location of the new project. Any storage location can be selected using the  button.
- **Template** selection field: You select a template using the  selection button. The usual range of templates and basic projects are available for selection.
- Input field/selection field **Specify creation date**
- Input field **Specify creator**

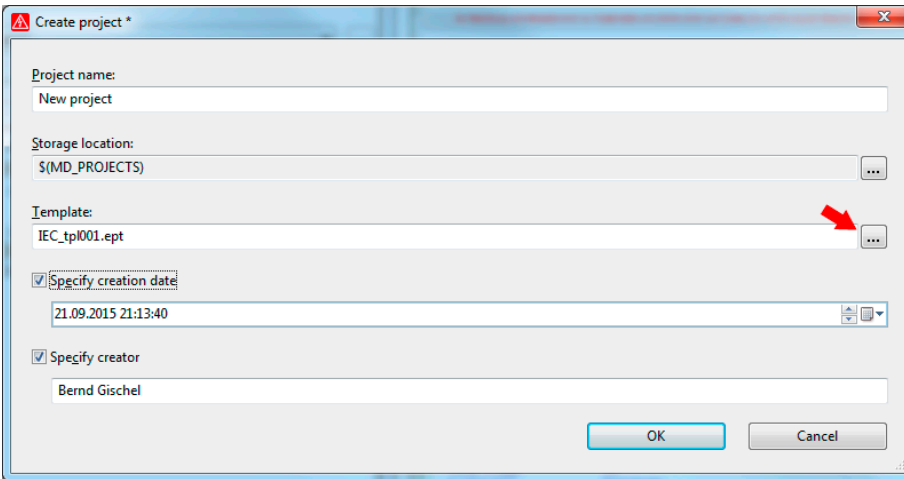


Fig. 3.9 Create project dialog

You can, but do not have to, fill in the information under *Specify creation date* and *Specify creator*.



**NOTE:** These fields cannot be changed later on. It is therefore very important to make sure you enter the correct data.

After defining the above entries, you need to select a template. This can be a project template or a basic project.

You simply click the More button. In this example, the **Select project template/basic project** dialog opens, and the basic project **Handbook.zw9** will be used to create the new project. You can select the relevant project type in the *File type* field.



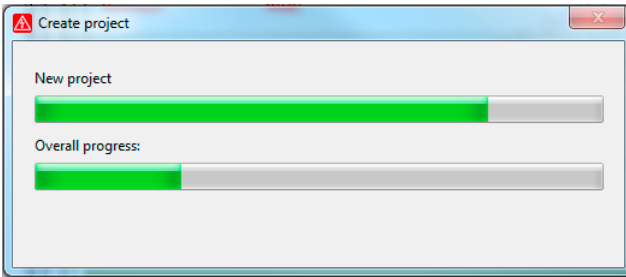


Fig. 3.12 The new project is being generated

Once EPLAN has successfully generated the data for the new project, the **Project properties** dialog is displayed. You do not necessarily need to edit these at the moment. This can be done later during project editing.

EPLAN opens the **Project properties** dialog with the *Properties* tab. The project properties can now be adjusted or completely changed on the *Properties*, *Structure* etc. tabs.

There is one limitation: The *structure of the pages*, located in the *Structure* tab, can no longer be changed (grayed out). It is fixed because the page structure was defined in the basic project.

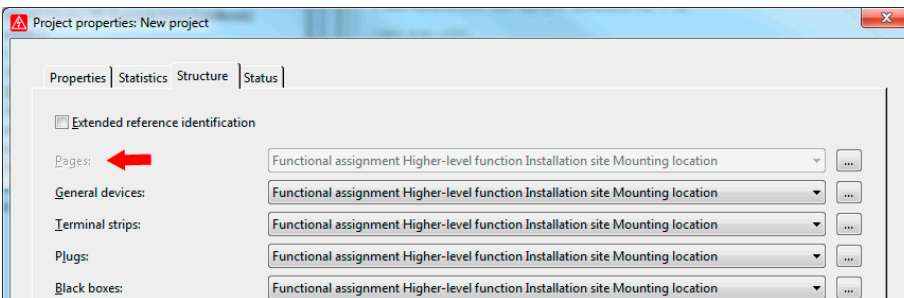


Fig. 3.13 Project properties – Structure tab

When you click **OK**, the project properties are saved and the project is immediately opened in the page navigator (it can also be opened using the **F12** key or you can display the overview with the **PAGE/NAVIGATOR** menu item). The project can now be edited.

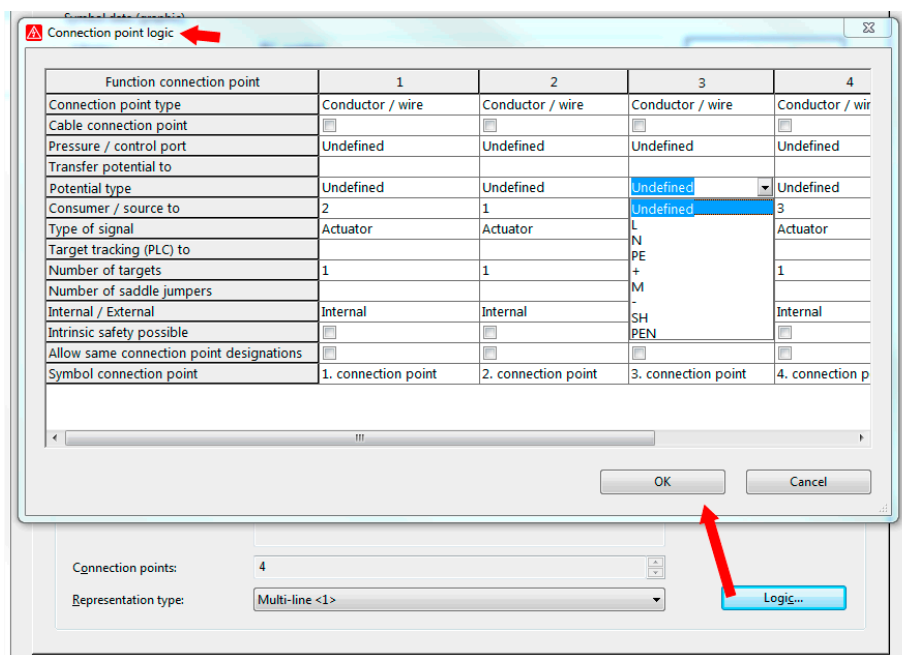


Fig. 4.153 Logical functions of individual connection points

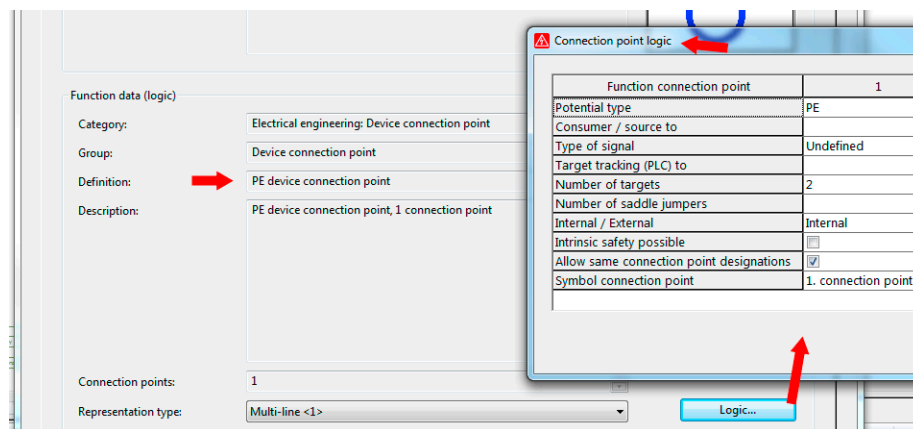



Fig. 4.154 Allow same designation

A typical example of changing the *Connection point logic* is the enabling of the *Allow same connection point designation* setting when using device connection points (here PE). This makes it possible, like with terminals, to use the same designation several times (PE rail), and the check run will not find any duplicate connection point designations.

### 4.8.5 Parts tab

On the *Parts* tab, you can assign one or more parts to a symbol. Click the **Part number** field and then use the  button that appears to switch to parts management.

In **parts management**, you select the necessary part and click OK to apply it to the symbol. Parts management automatically closes after the part is applied.

In addition to simple part selection, this dialog also has a **DEVICE SELECTION** button. In contrast to simple part selection, this will offer only devices for selection that fit the existing functions of the symbol in the project. This ensures that EPLAN selects, for example, a coil for a coil rather than a motor overload switch. **DEVICE SELECTION** is the preferred method.

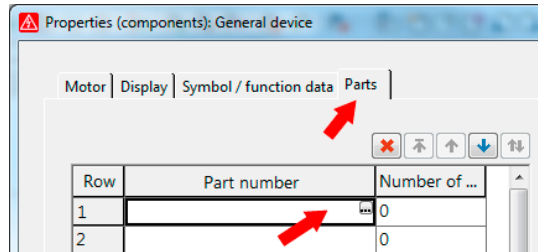


Fig. 4.155  
Simple part selection

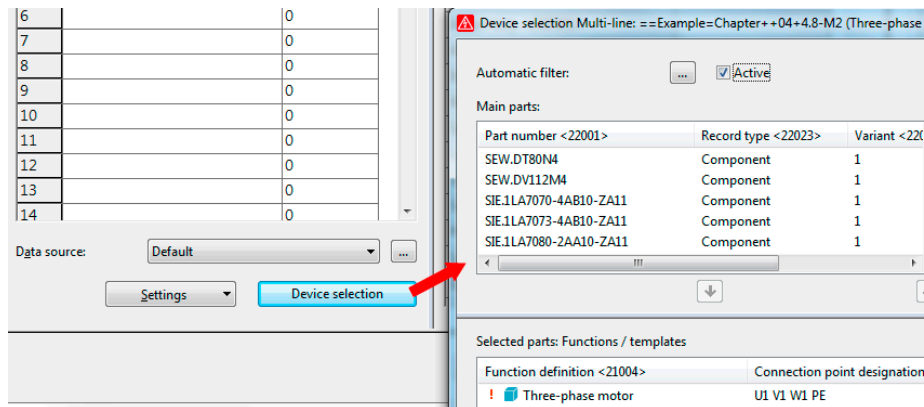


Fig. 4.156 Device selection

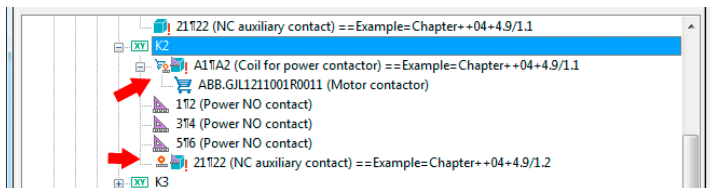


Fig. 5.42 Object with device protection

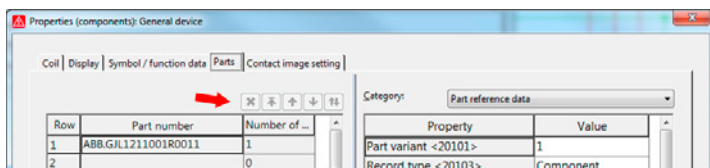


Fig. 5.43 Protected part (Parts tab)

### 5.2.5.2 Disable

The protection is easily disabled again by selecting the objects and then clicking the PROJECT DATA/DEVICES/DISABLE DEVICE PROTECTION menu.

## 5.2.6 Import (device data)

The IMPORT function in the device navigator allows for external data lists to be imported in EPLAN.

	B	C	D	E	F	G
1	Part number	Type designation of part	Order number	Number of units / qu	Remark	Function definition
2	ExamplePartNumberF22	ExampleTypeDesignationF22	ExampleOrderNun	1	NEW	Safety fuse
3	ExamplePartNumberK22	ExampleTypeDesignationK22	ExampleOrderNun	1	NEW	Coil for power contactor
4	ExamplePartNumberQ22	ExampleTypeDesignationQ22	ExampleOrderNun	2	NEW	Fused disconnect, triple
5						
6						

Fig. 5.44 Example of data list (Excel)

An import scheme must be used in EPLAN in order to import the data. EPLAN data fields and external data fields are assigned in this scheme.

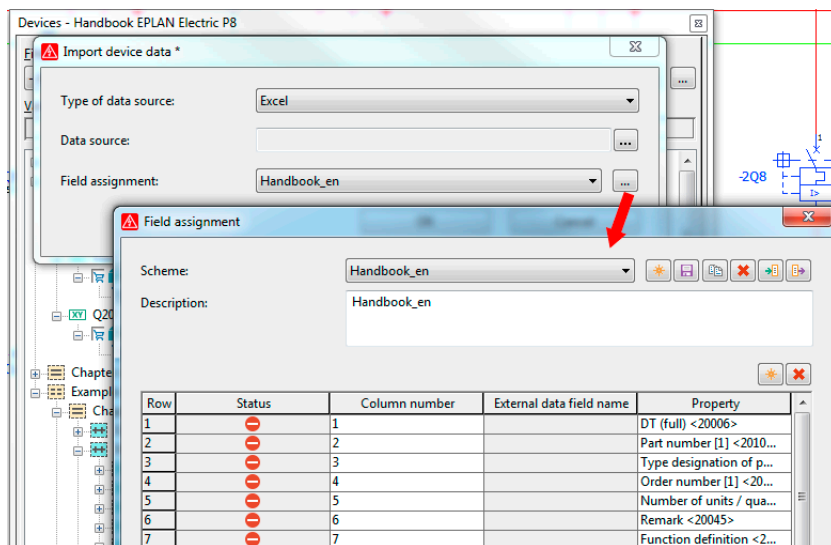


Fig. 5.45 Example of import scheme

A default import scheme can be configured in the settings under **OPTIONS/SETTINGS/PROJECTS/[PROJECT NAME]/DEVICES/IMPORT**.

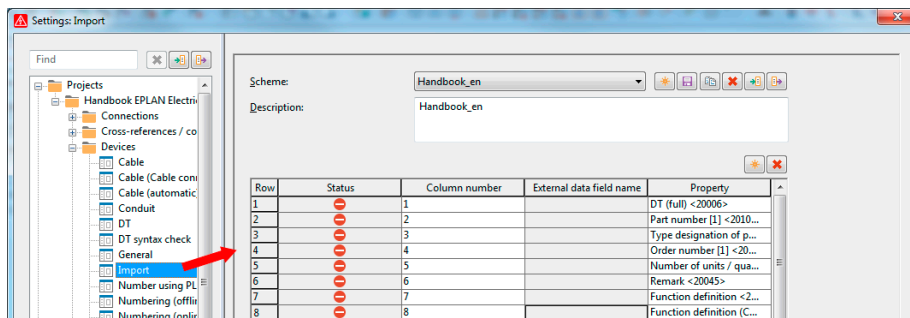



Fig. 5.46 Scheme in project settings

After selecting **IMPORT**, EPLAN opens the **IMPORT DEVICE DATA** dialog. Here, the type of data source, the data source itself and, of course, the import scheme (field assignment) are configured.

Here you should select/enter the full DT (the terminal strip designation), the numbering pattern and the setting defining whether or not these are multi-level terminals.

It is also possible to select a different function definition instead of the default terminal. Just click the  button. EPLAN switches to the **FUNCTION DEFINITIONS** dialog where you can select a different terminal and apply it by clicking the **OK** button.

Generate functions

However, this is not a precondition. All function definitions can be easily changed later using block editing in the terminal strip navigator.

We return once more to generation of the functions: The functions can only be generated when all entered data is correct (EPLAN will enable the **OK** button). If an error exists in the numbering pattern, e.g. a missing comma, then the **OK** button is not enabled. You must check for this. When the **OK** button is clicked, EPLAN generates a terminal strip according to the specified options.

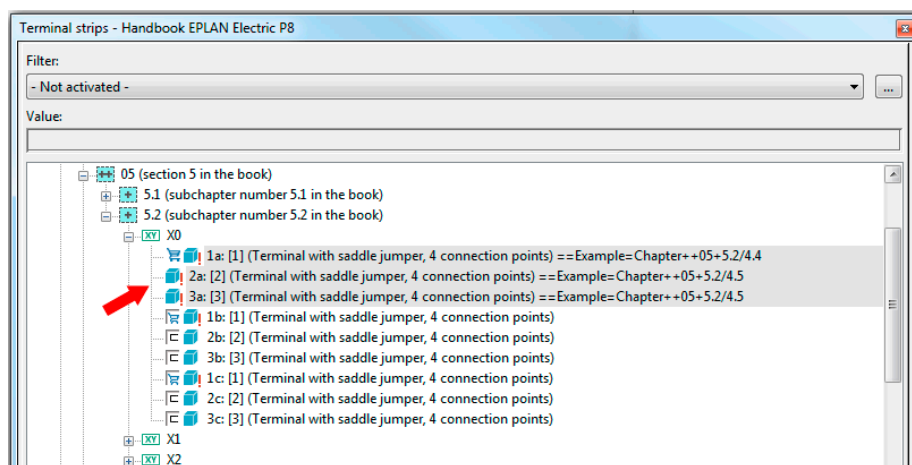


Fig. 5.88 New terminal strip with placed and unplaced terminals



**NOTE:** The newly created terminals do not have any parts data. This data must (can) be assigned later using device selection.

### 5.3.6 New terminals (devices)

In addition to the easy generation of new terminal strips and new terminals, it is also possible in the terminal strip navigator popup menu to generate new terminals as devices on the basis of existing parts and their function templates.

Start the **NEW TERMINALS (DEVICES)...** menu entry from the popup menu.

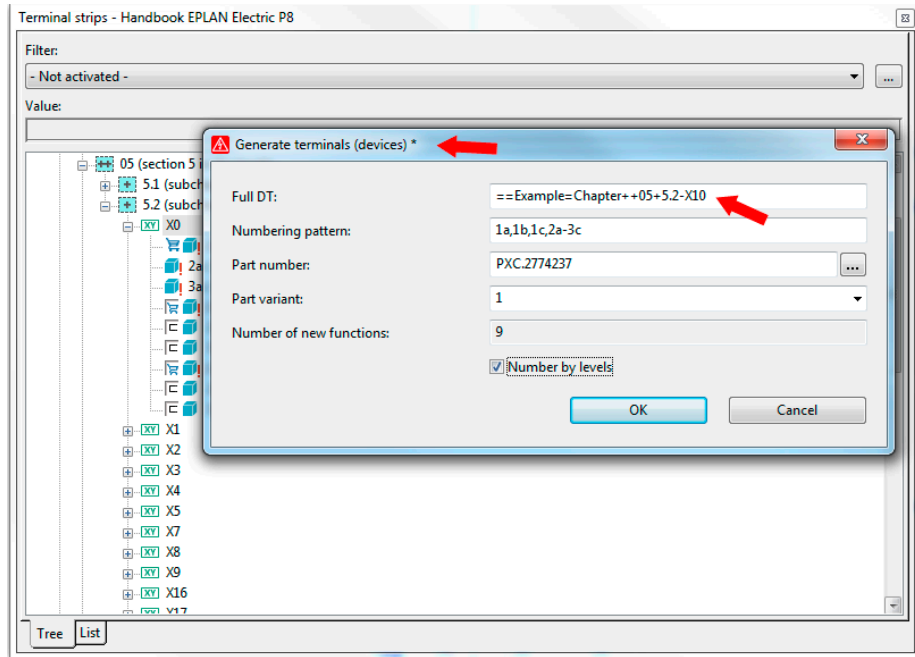


Fig. 5.89 Generate terminals (devices) dialog



EPLAN opens the **GENERATE TERMINALS (DEVICES)** dialog. The entries are similar to the previous section. You need to select a DT, a numbering pattern, and, most importantly, a part (the device) from parts management.

When all entries are correct, you can start device generation by clicking the **OK** button. EPLAN saves the functions in the navigator as unplaced functions.

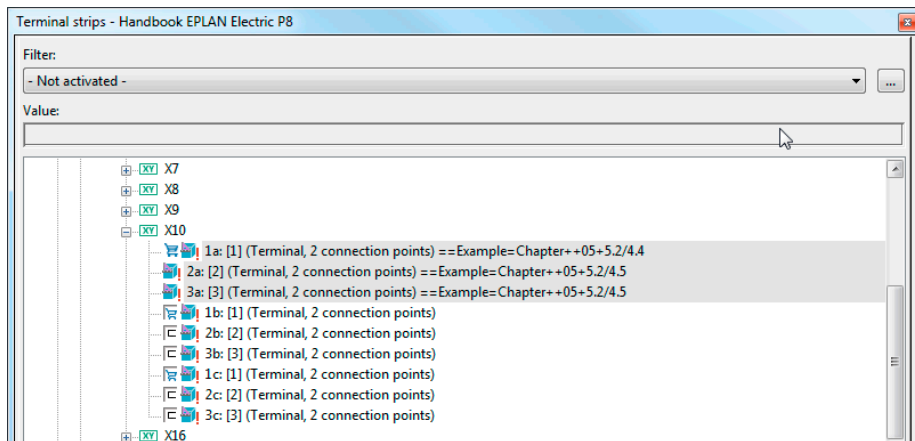


Fig. 5.90 Generated, new terminals (devices)

In contrast to the last section, these new terminals are real devices. They already have parts data.

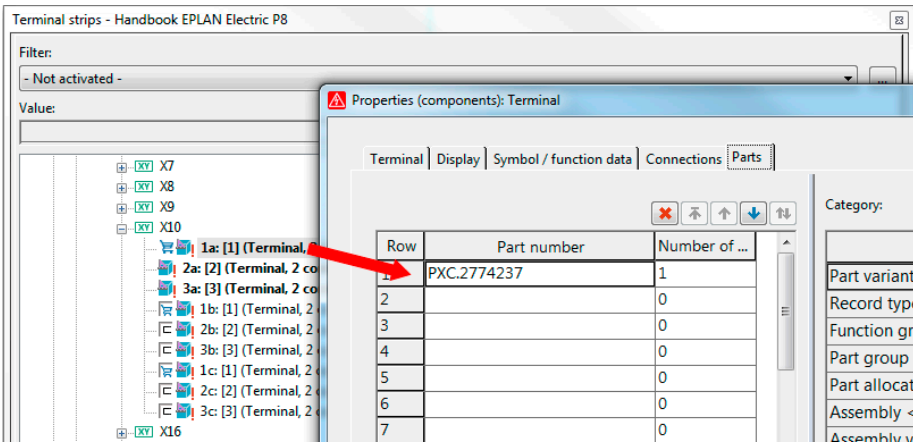


Fig. 5.91 Terminal parts data

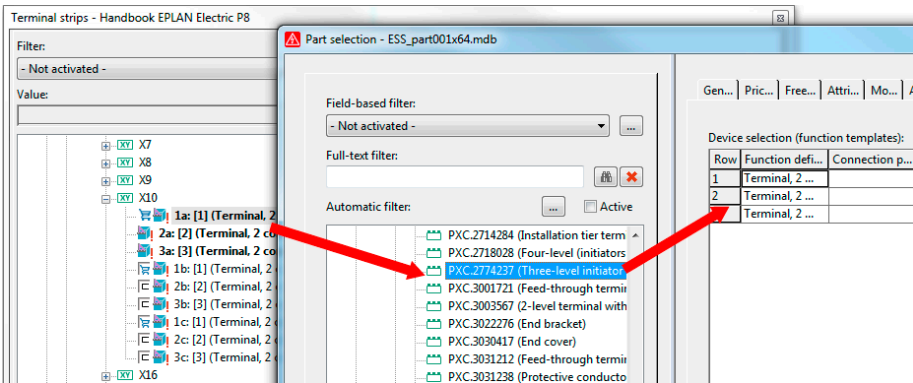


Fig. 5.92 Function template of the terminal part

### 5.3.6.1 Main terminals/Auxiliary terminals

It is important to know that, in addition to the generation of terminals or of terminals as devices, EPLAN has introduced new terminal functions and a new term in Version 2.0 – the **Main terminal**.

What is a main terminal? It is comparable to a main function; a terminal with multiple function definitions can only be identified once as a main terminal. All of this terminal's other functions cannot be designated as main functions. These are so-called **auxiliary terminals**.

If all of the settings were properly selected, EPLAN can now generate the assignment list. Use the **EXTRAS** button in the **ADDRESSES/ASSIGNMENT LISTS** dialog to select **EXPORT ASSIGNMENT LISTS**. In the **EXPORT ASSIGNMENT LISTS** dialog, you can check the settings once more and adjust the settings if necessary. Depending on the existing CPUs (there might be several controls in the project), select the correct option before an export in the **ADDRESSES/ASSIGNMENT LISTS** dialog.

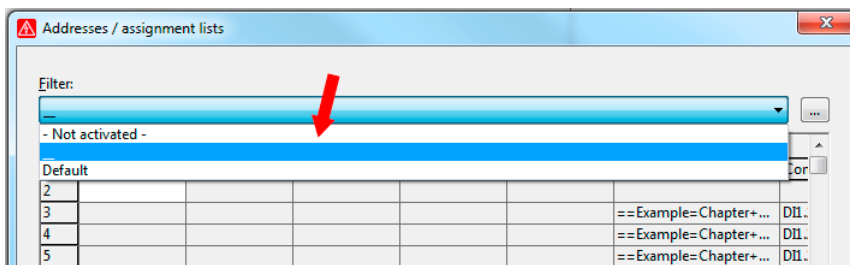


Fig. 5.152 CPU filter

You then simply confirm this dialog with **OK**. EPLAN generates the assignment list in the desired PLC software format and saves it in the specified directory.

### 5.6.5 Address

EPLAN allows simple addressing or readdressing of PLC terminals via the **ADDRESS** function in the **PROJECT DATA/PLC** menu. The functions in the logical PLC overview and the functions in the schematic for the PLC terminals in distributed view will be re-addressed or addressed for the first time.



**NOTE:** In order for all PLC functions to be addressed, it is sufficient to select the PLC card in the PLC navigator (but it should no longer have any messages from message management, that is, it must be “error-free”). This ensures that all of the functions, those of the logical PLC overview and the PLC functions represented in distributed view, are included and subsequently addressed.

In the PLC navigator, you select the card to be addressed. Then you call up the **ADDRESS** function in the **PROJECT DATA/PLC** menu.



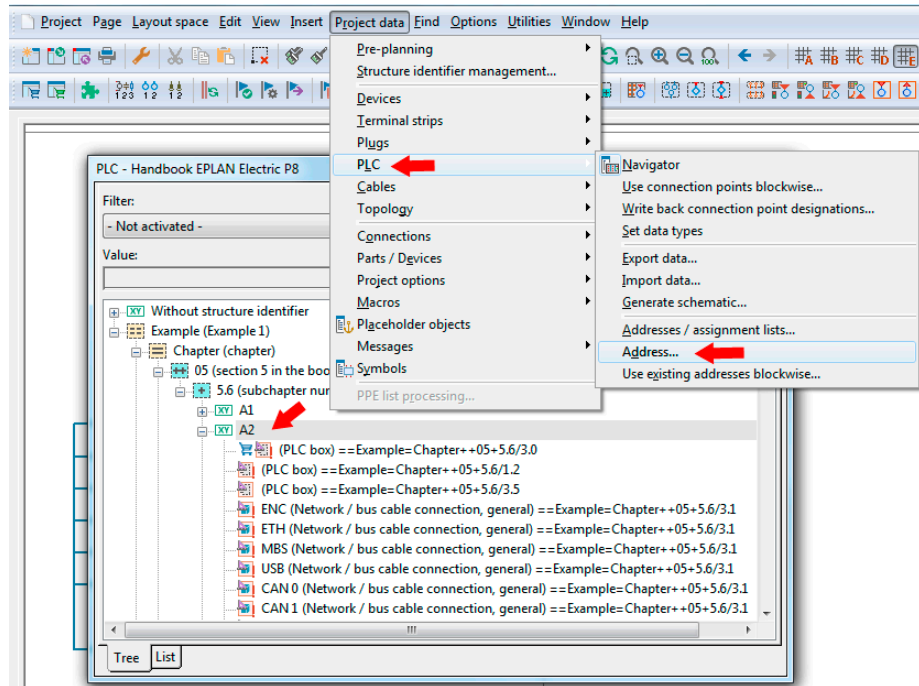


Fig. 5.153 Selecting the card to be addressed and calling up addressing

EPLAN now opens the **READDRESS PLC CONNECTION POINTS** dialog.

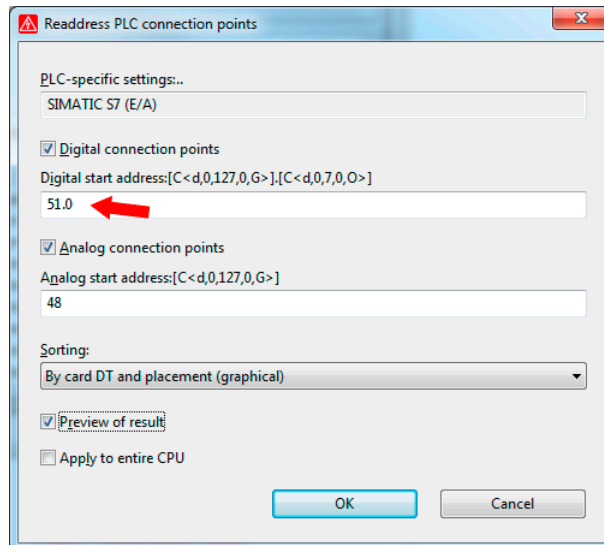
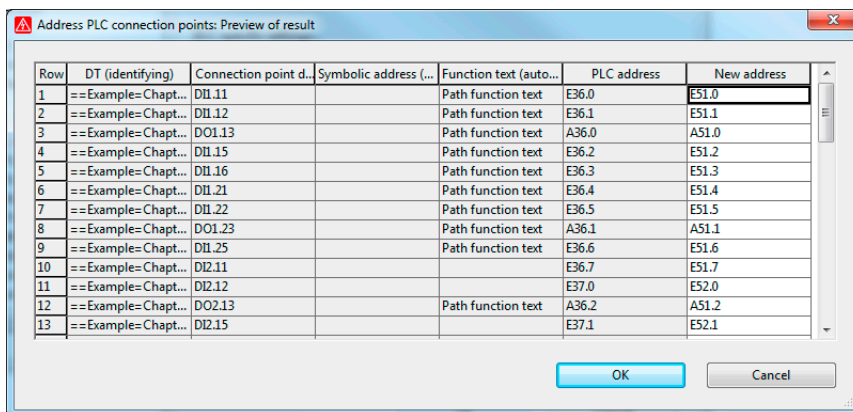


Fig. 5.154 Defining start addresses

In the **Digital start address** and **Analog start address** fields, the new address is entered *without* a prefix. EPLAN obtains the relevant prefix, meaning whether an entry begins with E or with I, according to the selected scheme, which is entered in the *PLC-specific settings* selection field. It is possible, however, to enter a prefix in the start address entry field, an “IX” for example. EPLAN would then use this primarily during addressing, and ignore the setting of the *PLC-specific settings* scheme.

I recommend leaving the *Preview of result* parameter switched on. When you click **OK**, the **ADDRESS PLC CONNECTION POINTS/PREVIEW OF RESULT** dialog is displayed, and you can use the **CANCEL** button to stop the process if necessary.



Row	DT (identifying)	Connection point d...	Symbolic address (...)	Function text (auto...	PLC address	New address
1	==Example=Chapt...	D11.11		Path function text	E36.0	E51.0
2	==Example=Chapt...	D11.12		Path function text	E36.1	E51.1
3	==Example=Chapt...	D01.13		Path function text	A36.0	A51.0
4	==Example=Chapt...	D11.15		Path function text	E36.2	E51.2
5	==Example=Chapt...	D11.16		Path function text	E36.3	E51.3
6	==Example=Chapt...	D11.21		Path function text	E36.4	E51.4
7	==Example=Chapt...	D11.22		Path function text	E36.5	E51.5
8	==Example=Chapt...	D01.23		Path function text	A36.1	A51.1
9	==Example=Chapt...	D11.25		Path function text	E36.6	E51.6
10	==Example=Chapt...	D12.11			E36.7	E51.7
11	==Example=Chapt...	D12.12			E37.0	E52.0
12	==Example=Chapt...	D02.13		Path function text	A36.2	A51.2
13	==Example=Chapt...	D12.15			E37.1	E52.1

Address PLC connection points

Fig. 5.155 Checking readdressing

If the result is correct, you click **OK** to confirm the **ADDRESS CONNECTION POINTS/PREVIEW OF RESULT** dialog and EPLAN readdresses the PLC functions of the selected cards in the entire project.

## 5.6.6 New

As in the other navigators, new devices with a function definition can also be created in the **PLC navigator**. The **NEW...** item in the popup menu is used for this.

EPLAN opens the **FUNCTION DEFINITIONS** dialog. In the PLC navigator you can only select PLC function definitions. After applying the function definition by clicking the **OK** button, EPLAN opens the **PROPERTIES (COMPONENTS) PLC BOX** dialog. Here you must make the desired entries and save the properties. You can also immediately perform a *device selection* for the new PLC card.

Now, select all elements using the mouse, then close this action with the second clicked point. All objects are assigned to this macro box now.

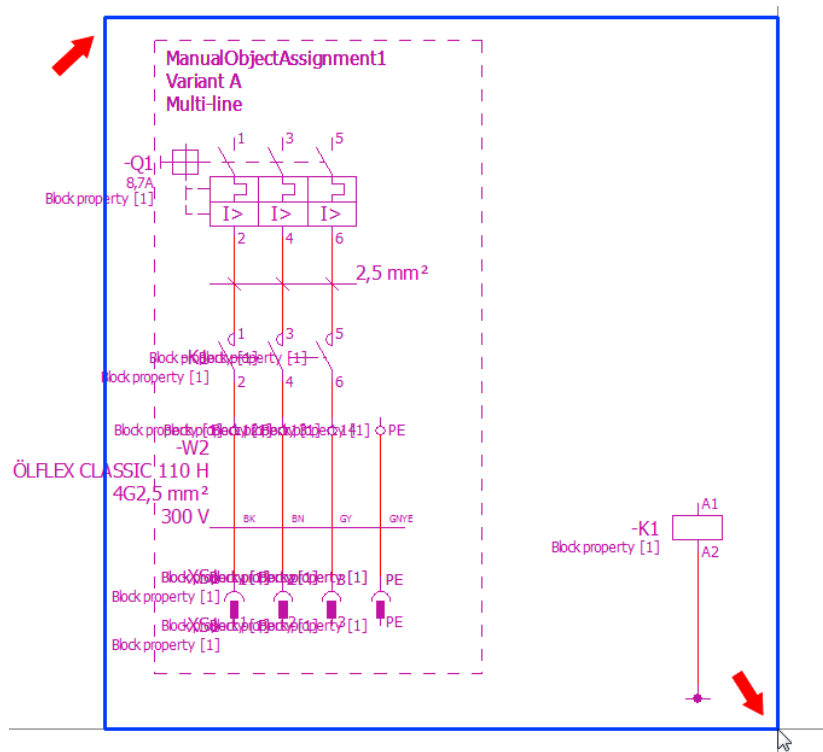


Fig. 5.193 Assigning exterior objects to the macro box

To verify, you can call the popup menu of the macro box and click the **SELECT ASSOCIATED OBJECTS** menu item. EPLAN selects the corresponding objects.

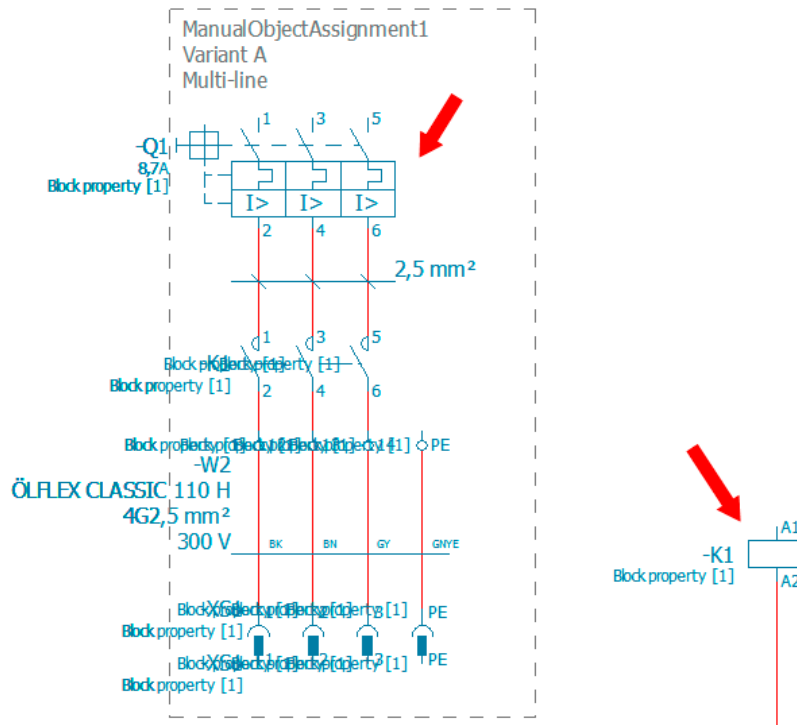


Fig. 5.194 All objects associated with the macro box

This assignment can be broken up again by calling the popup menu of the macro box and selecting the **DISCARD MANUAL ASSIGNMENT** menu item.

#### 5.8.3.2.4 Ignore macro box when inserting on mounting panel

The **IGNORE MACRO BOX WHEN INSERTING ON MOUNTING PANEL** option ensures that the macro box will be ignored when placing such a macro (Panel layout representation type).

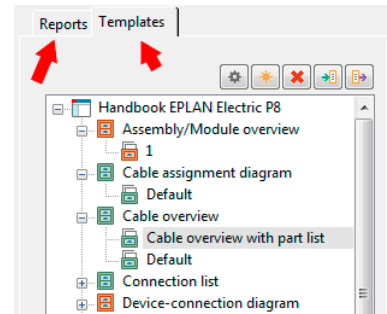
### 5.8.4 Macro navigator/Generate automatically

Once the macros and corresponding data, such as macro name, have been assigned and/or entered, go to the **PROJECT DATA/MACROS** menu and click **GENERATE AUTOMATICALLY**.

The dialog is divided primarily into the *Reports* and *Templates* tabs, and the right part, which contains the report data, e.g. from which page the report should be generated, which filter and sorting settings should be used, and much more.

The *Reports* tab is usually empty before reports are generated from the project data for the first time, i.e. there are no entries, and the *Templates* tab is also usually empty.

Fig. 6.79  
Left area with tabs



Property	Value
Name	Cable overview with part list
Start page of report block	=Example=Chapter++06+6.3.3/10
Supplementary field: Sheet no.	1
Source project	
Filter setting	Cable typ
Sort setting	
New page if property is changed	
Functions: Filter setting	
Functions: Sort setting	
Functions: New page if property is cha...	
Trade	General
Manual page description	
Automatic page description	<input checked="" type="checkbox"/>
Page sorting	From settings
Form	HBE_F10_003_FF1

Fig. 6.80 Right area with additional information

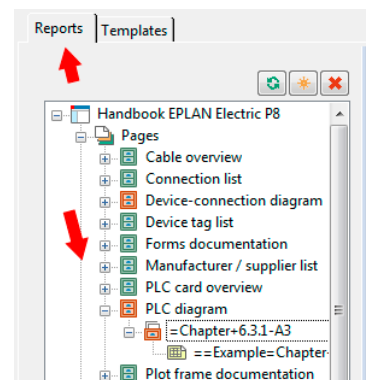










**NOTE:** If the project was copied with the **Copy with reports** option, then the old reports will, of course, be visible in the *Reports* tab. Templates may also already be present.

After graphical reports, such as a parts list, have been generated from the project data for the first time, the *Reports* tab will contain an overview of all reports in the project. Normal graphical outputs (each graphical output on a new page) are then shown in the *Pages* folder and are visually distinguished by a small graphical symbol.

The graphical symbols have the following meanings:

Fig. 6.81  
Tree: Pages



Symbol	Node	Description
	Source project (if applicable)	Contains the project that has been entered as the source project for the project or the reports/templates (if applicable)
	(Report) Pages	Node contains generated reports
	Function-related report types	Node includes function-related reports, such as terminal diagrams
	Report type for overview reports	Node includes overview reports, such as a cable overview
	Report blocks (function-related reports)	Node includes reports that belong to a report block of function-related reports
	Report blocks (overview reports)	Node includes all reports that belong to a report block of overview reports
	Report pages/placed reports	Displays a report page or manual placement of an embedded report
	Embedded reports	Node includes all embedded reports that have been generated

## 6.5.2 Generate reports without templates

In general, you can directly generate reports in EPLAN. You do not need to create any templates for this. To generate a report, you simply begin by clicking the **NEW...** button.

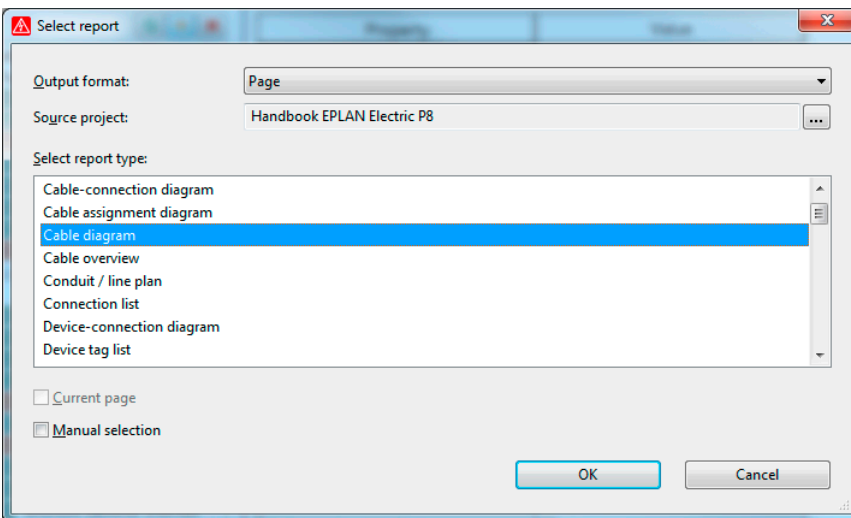


Fig. 6.82 Selecting a report



**NOTE:** An unwanted replace action can only be undone by exiting the IDENTIFIERS dialog with the CANCEL button.

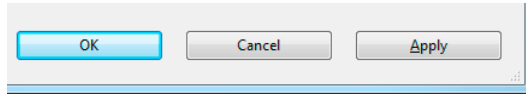


Fig. 7.23 More buttons

In addition to the previously described SORT and EXTRAS buttons, the dialog also has the OK, CANCEL and APPLY buttons.

You use the OK button to exit the IDENTIFIERS dialog and, depending on the actions you have performed, you may need to confirm your changes in a subsequent dialog.

Since identifier editing has no UNDO function, unlike other features in EPLAN, the CANCEL button is very important, because it allows you to discard all changes made.

The APPLY button applies (saves) the changes made in structure identifier management without closing the IDENTIFIERS dialog. When performing comprehensive actions such as renaming or deleting of unnecessary identifiers, you should first save the contents of the IDENTIFIERS dialog via the APPLY button before performing the replacement action. If something goes wrong with the replacement action, you can click CANCEL to exit the Identifiers dialog. The status will then be exactly the same as before the replacement action started.

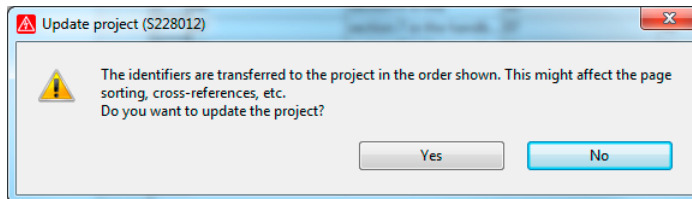


Fig. 7.24 Prompt after you click the OK button



**NOTE:** A kind of “interim save” (APPLY button) is helpful when editing the identifier structure so you do not lose all changes.

### 7.1.5 Configure protection (protect identifiers from changes)

Apart from the functions already described, EPLAN also allows for the option of preventing identifiers from being changed.

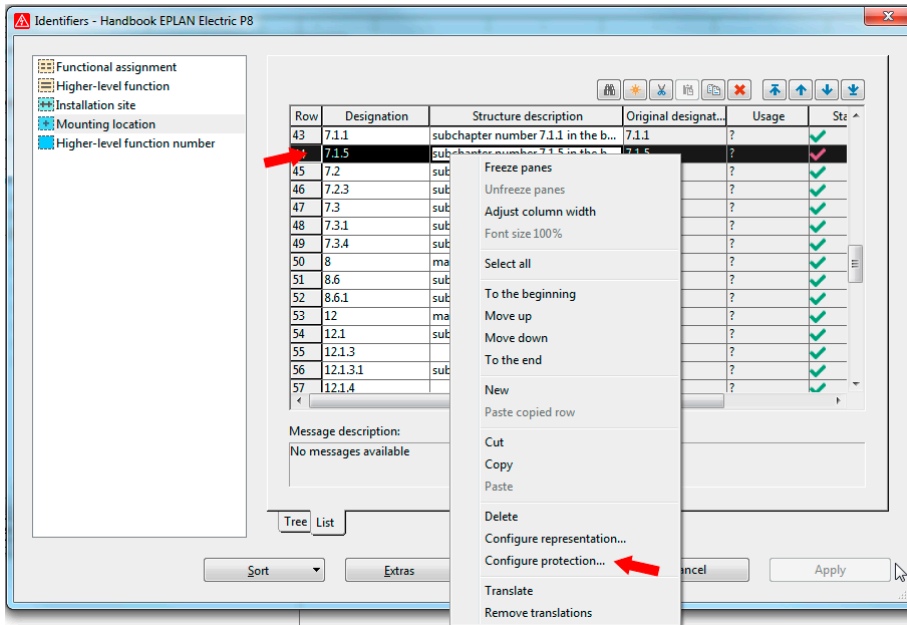


Fig. 7.25 Popup menu - Configure protection function

If you select the identifier and call the *Configure protection* function from the popup menu, EPLAN opens the CONFIGURE PROTECTION dialog.

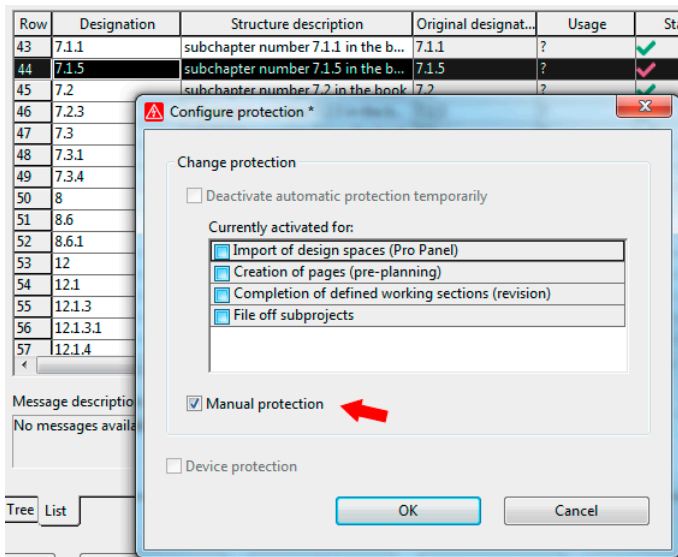


Fig. 7.26 Configure protection dialog

# Index

## Symbols

### 368  
#H# 368  
#ID# 368  
#RO# 368  
#RW# 368  
<<...>> string 102*f*.

## A

action line 593  
actions 439, 501  
adapt page structure 88  
add 147  
address 236, 239  
alignment 141  
alphanumeric 383  
angle variant 150  
API 39  
apply 386  
archive 491  
area of application 291  
arguments 595  
assign 176  
assign conductors 642  
assign main function 177  
assignment 218  
assignment lists 236  
assign pages 454  
asterisk 110  
AutoComplete 40

autoconnecting 568  
AutoCorrect 40  
automated processing 439, 501  
automatic cable generation 223  
automatic cable selection 221  
automatic generation 223  
automatic page description 527  
auxiliary contact 154  
auxiliary function 176, 181  
available format elements 360

## B

backed up 485  
background 462  
background color 588  
backing up master data 505  
backup 440, 489  
back up data 502  
backup directory 496, 498  
backup drive 36  
back up entire project 493  
back up external documents 494  
backup file name 506  
backup function 489  
back up image files 494  
backup scope 489  
basic project 75, 567  
BIN 13  
black and white 458  
black triangle 59  
blank pages 329

block editing 207, 436  
block properties 417  
bmp 460  
bold 438  
border 142, 149  
brackets 27  
break up assemblies 352  
browse 323  
by column or row 27  
by position 383

## C

cable assignment diagram 295  
cable conductor 217  
cable connection diagram 295  
cable data 225  
cable definition 228, 640  
cable definition line 20, 223  
cable diagram 297  
cable editing functions 221  
cable navigator 217  
cable numbering 21, 220  
cable overview 297  
cable parts 321  
cable properties 296  
cable selection 222  
cable type 223, 641  
cancel 220  
category 361, 391, 394  
CD/DVD burner 491  
center of rotation 566

- CFG 13
  - changed pages only 464
  - change of standard 37
  - change positions 55
  - characteristic 421, 547
  - characters 329
  - check form 526
  - check routines 390
  - check usage 384
  - circle 117
  - clipboard 34
  - close 100, 438, 528, 534
  - closed 100
  - color codes 28
  - color depth 458
  - color designation 319
  - color information 458
  - color setting 37, 479, 581
  - column 27, 533
  - column configuration 66, 403
  - combine 326
  - COM interface 39
  - comment function 592
  - company fonts 42
  - comparison criteria 421
  - comparison project 71
  - complete 440
  - completed messages 396
  - component data 421
  - components 147, 634
  - compress 30, 439, 499
  - compression 458, 500
  - compression function 258
  - conductor 217
  - conductor designations 226
  - configure 47, 54, 402
  - connection data 217, 223, 290, 317
  - connection definition point 20, 568
  - connection dialog 37
  - connection junction 24, 37
  - connection levels 294
  - connection list 306
  - connection point description 147, 232, 421, 637
  - connections 28, 110, 217, 367
  - contact image 28, 154, 157
  - contact image coil 272
  - contact image margin 158
  - contact image offset 576
  - contact image position 577
  - contactor coil 157
  - contacts 157
  - continued dimension 129
  - conversion 537
  - conversion to uppercase 20, 593
  - coordinate input 111, 115
  - coordinates 109, 114, 462
  - coordinate system 110, 115
  - copied 88, 520
  - copy 90, 94, 128, 382, 439, 443, 461
  - copy from/to 94
  - copy to project 495
  - correction 30
  - create form 529
  - create plot frame 535
  - create report template 346
  - creating 69
  - creation date 628
  - creator 628
  - cross-reference 27
  - cross-reference representation 27, 154
  - cross-references 154
  - currency 416
  - cursor position 109
  - cursor settings 37
  - customer-supplied 605
- D**
- data area 527
  - data backup 440, 485, 505
  - database 385
  - data entry fields 102
  - data portal 541
  - data records 318, 528
  - data rows 528
  - data to be compressed 500
  - data type 235
  - data volume 17, 500
  - default cable type 223
  - default directory 14
  - default settings 40, 57, 321, 498, 500
  - default values 158, 221
  - definition 151
  - delete 98, 128, 381*f.*, 439
  - deleted 99
  - delete report block 346
  - description 407, 462, 490, 507
  - description dialogs 34
  - designations 414
  - device connection diagram 293
  - device cross-references 28
  - device dialog 54
  - device groups 436
  - device navigator 174
  - devices 361
  - device selection 30, 226, 420
  - device structure 69, 443
  - device tag 174, 220
  - device tag list 292
  - device tag structure 24
  - device types 166
  - dialog elements 53
  - dictionary 40, 383
  - digital start address 241
  - dimensioning 129
  - dimension line termination 26
  - direct entry 145
  - directory 71, 369, 506
  - directory structure 13, 34
  - display 19, 22, 148
  - displayed DT 147, 216, 637
  - displayed languages 142
  - distortion 462
  - distributed view 232
  - DOC 477
  - document type 380
  - dongle 8
  - drawing directory 294

DRX 116  
 DRY 116  
 DWG 446  
 DXF 446  
 DXF/DWG dialog 446  
 DXF/DWG directory 452  
 DXF/DWG files 38, 448  
 dynamic 303, 527  
 dynamic forms 328, 527

## E

edb 444  
 edc 366  
 edit 195, 217, 436  
 edit externally 365  
 editing in table 66  
 editor 357  
 edit properties 101  
 edit terminal strips 197  
 elk 71, 444  
 ell 71  
 elp 71  
 elr 71  
 els 71  
 elt 71  
 elx 71  
 e-mail 440, 485, 491, 507  
 e-mail message split size 36  
 embedded reports 290  
 enclosure legend 301  
 end point 575  
 engraving text 147  
 enlarge 127  
 enlarged 110  
 enlargement 449  
 entirely without report 443  
 entirely with report 443  
 entire project 222, 459, 464, 477  
 epj 439, 467  
 equals sign 318  
 error 11, 394  
 Excel 289, 356, 358, 362  
 Excel template 367

exchanging 366  
 exclamation mark 570  
 export 353, 445, 456, 466  
 exported 373  
 extension 142  
 extent 202, 443  
 external application 372  
 external files 356  
 external format 289  
 external PPC system 39  
 external project 97

## F

female pins 212, 214, 304  
 filed-off project 71  
 file off 491  
 file type 366, 370, 449  
 filter 59, 146, 292, 399, 441, 501  
 filter dialogs 59  
 filter setting 350  
 find 385  
 font 42, 140  
 font size 140  
 footer 359  
 form 351  
 format 58, 140, 182  
 format elements 359, 361, 371  
 format of the subpage 329  
 formatting 58  
 form editor 520, 523  
 form errors 526  
 form handling 527  
 form name 523  
 form overview project 514  
 form project 70  
 form properties 44, 291, 527, 530, 619  
 forms 511, 519  
 forms documentation 293  
 form settings 317  
 form structure 520  
 found words 383  
 free properties 416  
 freeze report block 346

full DT 147  
 full name 415  
 full page name 85, 632  
 functional assignment 379  
 function data 67  
 function definition 30, 151, 155, 190, 205, 213, 241, 421  
 function group 419  
 functions 367  
 function template 420  
 function text 134, 147  
 function text synchronization 179

## G

general 371  
 generated 81  
 generate file names 449  
 generate functions 206, 242  
 generate pin 215  
 generate plugs 214  
 generate project reports 355  
 generate report 334  
 global 566  
 GRAFCET 20  
 graphic 81, 455  
 graphical approach 12  
 graphical buttons 53  
 graphical coordinate system 110  
 graphical elements 127  
 graphical functions 117, 523  
 graphical output 289, 321, 326, 334  
 graphical output pages 323, 328  
 graphical pages 81  
 graphical reporting 318  
 graphical reports 289, 333  
 graphics card 1  
 grid 101, 109, 112  
 grid sizes 37  
 group 127  
 group number 419

**H**

handle 261, 269  
 handle parts when outputting 320  
 handles 58  
 hardware 1  
 hardware protection 8  
 hash 110  
 header 359  
 higher-level function 379  
 higher-level function number 380  
 highlighted 221, 223, 233, 365, 520

**I**

identical function text 318  
 identifier 35, 368  
 identifier block 380  
 identifiers 21, 85, 145, 182, 375  
 identifier set 21  
 identifying property 232  
 IEC identifier structure 74  
 illogical values 368  
 image files 456  
 image formats 456  
 IMAGES 461  
 import 353, 372, 445, 459, 466f., 537  
 import of parts 550  
 increment 113  
 indirectly 147  
 information 109  
 initial data 647  
 insert 91, 128, 523  
 inserted 459  
 insertion mode 89  
 insertion point 111  
 installation 1  
 installation site 379  
 integer 329  
 intelligence 134, 475  
 interactive pages 81  
 interfaces 38  
 internal 39, 444

internal output 289  
 interruption points 569  
 item numbers 383

**J**

jpg 460  
 jump functions 475  
 jump point 389

**K**

keep aspect ratio 462, 465  
 keep source directory 461  
 key combination 61

**L**

label 359  
 labeling 38, 289, 356  
 labeling data 357  
 labeling dialog 361  
 language 142  
 language display 149  
 language output 357  
 layer 140, 404  
 layer configuration file 405  
 layer designations 404  
 layer export 405  
 layer import 405  
 layer management 404, 614  
 layers 295, 302, 404  
 layer settings 405  
 layers of a macro 258  
 legend form 618  
 letters 31  
 level 320  
 license number 8  
 line 117  
 line thickness 30  
 links 495  
 lists 444  
 list view 65, 79, 91, 146  
 local 13  
 logical coordinate system 111

logical page 81  
 logical PLC overview 233  
 logic elements 113  
 login data 542  
 long-term archiving 456  
 lost 100

**M**

macro box 256  
 macro name 260  
 macro project 70, 255  
 macros 255  
 main form 325  
 main function 176, 226, 637  
 male pins 214  
 management 434, 439  
 managing 70  
 manual 158, 225, 290, 349, 389, 404  
 manual object assignment 261  
 manual placement 301, 339, 341  
 manual selection 341f.  
 manufacturer 414  
 manufacturer data 545  
 master data 69, 505, 508  
 master data directories 61  
 maximum 527  
 message class 393  
 message description 389  
 message management 11, 30, 388  
 message number 394  
 message priority 389  
 message text 394  
 message type 389  
 method 490  
 minimum number 328  
 min. no. of report rows on report page 328  
 motor overload switch contact image 154  
 motor overload switches 28  
 mounting data 418  
 mounting location 324, 380

mounting panel 264  
 mounting site 147  
 move 157, 218, 381, 439, 502  
 move base point 115  
 moved 148  
 multi-line 27, 81  
 multiple selection 508  
 multiple starts 43

## N

name 35, 350  
 naming conventions 69  
 navigation elements 475  
 navigator 165  
 negative values 111  
 network drive 34  
 new 190, 205, 213, 228, 241, 346, 359, 529  
 new device 193, 244  
 new form 522  
 new functions 206, 214, 242  
 new layer 406  
 new page 85  
 new page if property is changed 350  
 new project 74  
 normal texts 133  
 note 394  
 no type of check 394  
 numbering 21, 28, 179, 181, 195, 219, 454  
 numbering format 182  
 numbering function 181  
 numbering (offline) 21  
 numbering (online) 21  
 numbering options 219  
 numbering pattern 242  
 number/name 150  
 number of decimal places 35  
 number (offline) 182  
 number plugs 213  
 number terminals 201  
 numeric 202  
 numeric keypad 435

## O

object-oriented approach 12  
 ODBC 39  
 offline 21, 181, 375  
 offline check 390  
 offline numbering 21, 181  
 offline type of check 395  
 one language (variable) 142  
 online 12, 290, 317, 375, 389  
 online assignment 21  
 online check 390  
 online/offline type of check 396  
 online system 12  
 only header data 444  
 only logic pages 444  
 open 87, 95, 323, 438, 460, 529  
 open in new window 87  
 operation 71  
 options 357  
 order number 414  
 organize 439  
 origin 110f.  
 original project 491, 538  
 output 19, 364, 450  
 output directory 448, 458  
 output file 357, 372  
 output form 346  
 output format 336  
 output settings 458  
 output sorting 463  
 output to pages 321  
 output type 357  
 overview 27, 40, 516  
 overview cross-references 27  
 overwrite with prompt 461  
 overwriting 72  
 overwritten 521  
 own layers 406

## P

pack 440  
 packed 440, 485  
 page 27, 84, 367, 445

page break 326, 527  
 page contents 88  
 page description 101, 351, 632  
 page editing 84  
 page handling 31  
 page macros 260, 270  
 page name 27, 85, 585  
 page navigator 79  
 page number 89, 98, 329  
 page numbering 568  
 page properties 44, 91, 101, 305, 365, 523  
 page property texts 136  
 page range 464  
 page scale 270  
 page sorting 323, 325, 351, 598  
 page structure 72, 77, 86, 97, 323, 443, 454, 514  
 page type 27, 33, 53, 81, 632  
 pair index 610  
 pairs 569  
 part 153  
 part assemblies 320  
 partial output 325, 351  
 part number 153, 414  
 part quantity list 292  
 parts data 413  
 parts database 30  
 part selection 30, 39, 153  
 parts list 291  
 parts management 172, 244, 411  
 parts master data 468  
 path areas 53  
 path function text 236  
 path function texts 134  
 path numbering 31  
 PDF export 476  
 PDF file 477  
 PDF format 475  
 percent 462  
 performance 35  
 PE terminals 202  
 phone 35  
 P\_ID 13  
 pin connection diagram 302

- PIN number 232
  - pins 212
  - placed 290, 462
  - placeholder object 273
  - placeholder text 523, 533
  - placing 326
  - plain text 133
  - PLC address 233, 236
  - PLC assignment lists 22
  - PLC box 241
  - PLC card 166, 232, 243
  - PLC card overview 302
  - PLC components 302
  - PLC data 245
  - PLC diagram 301
  - PLC navigator 231
  - PLC numbering 21
  - PLC overview 232, 234
  - PLC-specific settings 241
  - PLC terminal 232, 235
  - plot frame 31, 533
  - plot frame documentation 300
  - plot frame editor 531
  - plot frame properties 44, 158, 533
  - plot frames 511, 531
  - plug diagram 303
  - plug navigator 212
  - plug overview 304
  - plugs 212, 214, 304
  - plug/socket strips 214
  - png 460
  - point wiring 24
  - polyline 117
  - positions 158
  - post-processing 516
  - potential overview 300
  - prefix 20
  - preselection 30
  - preview 94, 452
  - preview dialog 179
  - preview of result 183, 220
  - previous versions 537
  - prices/other 415
  - print 463
  - print command 463
  - printer 463
  - print margins 465
  - print position 465
  - print preview 465
  - print settings 464
  - print size 464
  - print to scale 464
  - profile 440
  - program directory 13
  - program start 15
  - project 69
  - project cables 295
  - project checks 30, 390
  - project copy 443
  - project data 165, 212, 290, 318, 321, 328, 341, 363, 519, 523
  - project database 42, 435, 440
  - project directories 435, 440
  - project documentation 289, 294, 519
  - project editing 30, 71, 74
  - project file 486
  - project information 440
  - ProjectInfo.xml 486
  - project languages 142, 357
  - project management 15, 434
  - project master data 18, 30, 38, 61, 70, 323, 332
  - project messages 375
  - project name 74, 100, 496
  - project options 553
  - project options group 553
  - project options overview 563
  - project path 496
  - project properties 18, 44, 77, 486
  - project property texts 136
  - project selection 95
  - project setting 332
  - project-specific 404
  - project structures 22
  - project template 72
  - project tree 435
  - project type 70*f*.
  - properties 43, 77, 101, 194, 350
  - property 148
  - property arrangement 56
  - property arrangements 611
  - property dialog 111
  - property fields 437
  - property name 43, 147
  - property number 36, 43
  - property selection 45, 53, 101, 148
  - purchase price 415
- ## Q
- quantity unit 415
- ## R
- range 33
  - read back 372
  - read-only 368
  - read write 368
  - rectangle 117
  - reduce 127
  - reduction 449
  - relative coordinate input 115
  - remove project data 500
  - rename 439
  - renaming 98, 366
  - reorganize 439
  - repetition 318, 357
  - replace 382, 385
  - report pages 290, 329
  - report runs 317
  - reports 19, 35, 53, 134, 289, 334, 443
  - report type 53, 291, 322, 336, 347
  - representation type 151, 270
  - restore 495*f*.
  - restore back 495
  - restored 485
  - restore master data 507
  - restrictions 346
  - review 390
  - revised project 71

revision control 30  
 revision overview 300  
 revision tracking 71  
 round 329  
 row texts 533  
 RX 109  
 RY 109

## S

save 437, 478  
 save additionally 491  
 saved 373  
 scale 101, 127, 566  
 scaling factor 449  
 schematic project 70, 627  
 scheme 181, 220, 241, 358*f.*,  
 371, 389, 391, 447, 453  
 script name 502  
 scrolling 37  
 sections 553  
 select 12, 98, 180, 435  
 select associated objects 263  
 selected 342, 365, 371, 450  
 selected format elements 360  
 select form 323  
 selection 88, 464  
 selection list 147  
 select plot frame 534  
 separators 27, 38  
 sequence 53, 202, 403, 585  
 sequence chains 20  
 sequence sheets 20  
 sequential numbering structure 74  
 service time 419  
 set data types 235  
 settings 17, 164, 358  
 settings – company 41  
 settings – project 18  
 settings – station 41  
 settings – user 34  
 shopping cart 551  
 shortcut keys 40  
 single-line 27, 81  
 single-screen solution 2

size 462  
 snap 584  
 sort 196, 383  
 sort code 569  
 sorting 81, 384  
 sorting into 454  
 sorting sequence 86  
 sort setting 350  
 source 217, 229, 446, 477  
 special characters 20, 586  
 special text 45, 48, 136, 523  
 split size 491  
 standard base point 115  
 standard layers 405  
 start application 362, 372  
 starting point 575  
 start page 350  
 static 527  
 static coordinate input 115  
 static forms 328, 527  
 status 502  
 status bar 109  
 storage location 69, 75, 435  
 storage medium 491, 507  
 stored 31, 43, 61, 70, 323, 499,  
 529  
 storing 17  
 stretch 574*f.*  
 string of characters <<...>> 437  
 structure 77, 146  
 structure identifier management  
 81, 375  
 structure identifier overview 304  
 structure identifiers 20, 22, 31,  
 35, 85, 348, 375  
 student version 573  
 style version 448  
 sub-entries 404  
 subpages 31, 329  
 subsequent editing 366  
 summarized 324  
 summarized parts list 292  
 superior 577  
 supplementary field 350  
 supplier 414

switched on 113  
 symbol 27, 145, 634  
 symbol data 150  
 symbol/function data 150  
 symbol library 19, 31, 146  
 symbol list 145  
 symbol names 145  
 symbol overview 305  
 symbol preview 145  
 symbol project 70  
 symbol properties 27, 44  
 symbol representation type 146  
 symbol selection 145, 147, 171,  
 635  
 symbol variants 145  
 synchronization 70, 512  
 synchronize 29, 179  
 synchronize function texts 180  
 synchronize master data 291,  
 522, 580  
 synchronize parts 468  
 system master data 18, 30, 60,  
 70, 332, 511*f.*  
 system messages 35

## T

tab 366  
 tabbed page list 88  
 table of contents 294  
 target 217, 229  
 target and point wiring 24  
 target designations 454  
 target directory 496  
 target file 362  
 target project 76  
 target system 448  
 target wiring 24  
 technical characteristic 147  
 technical data 419  
 template project 567  
 templates 75, 333*f.*, 346, 363,  
 628  
 temporary 70, 512, 532, 535  
 temporary page 523, 529

temporary project 71  
 terminal connection  
 diagram 297  
 terminal diagram 299  
 terminal editing 166  
 terminal line-up diagram 298  
 terminal number 232  
 terminal parts 321  
 terminal schemes 203  
 terminal strip definitions 608  
 terminal strip navigator 195  
 terminal strip overview 299  
 text dialog 58  
 text expansion 143  
 text file 358  
 text input field 139  
 texts 132  
 title page/cover sheet 305  
 T-node 25, 37  
 total 324  
 total + higher-level function 325  
 transferred 180  
 translation 31, 133, 139, 143, 383  
 translation run 33  
 tree structure 80  
 tree view 64, 91, 146  
 two-screen solution 2  
 types of check 389

## U

UNDO command 100  
 UNDO function 366, 437, 531  
 unfold 28  
 ungroup 128  
 units 28, 35  
 unpack 440

unpacked 485  
 unplaced 217, 242, 281, 292, 444, 499  
 update 346  
 update pages 355  
 upper-case letters 20  
 use available function data 164  
 used 217  
 use existing 167  
 use graphical coordinates 114  
 use original DT 225  
 user 440  
 user-defined 57, 380  
 user interface 34, 63, 108  
 user settings 36  
 user supplementary field 437  
 using the mouse 63  
 utilities 289

## V

value 147  
 value sets 272, 569  
 variable name 277  
 variant 150, 270  
 viewer 622  
 viewpoints 165

## W

warning 394  
 watermark 30  
 wearing part 419  
 which cables? 222  
 window legend 301  
 window macros 70, 268  
 wire 217  
 workbook 88  
 working area 108  
 workspace 34*f.*  
 workstation 435

write back 233, 290, 367  
 write protection 491  
 writing back 220

## X

XML file 359, 366, 468  
 X,Y 110

## Y

Y positions 115

## Z

zipped project 71  
 zw1 505  
 zw2 505  
 zw3 505  
 zw4 505  
 zw5 505  
 zw6 505  
 zw7 505  
 zw8 505