# **PROCAD Systems AB**

has been active in the industry for CAD software for almost 30 years. We are the developer of CAD software ELPROCAD, as it is in Sweden's most widespread program for production of electrical documentation. Behind programs are professionals with extensive electrical engineering backgrounds. Our customers range from large corporations to one-person businesses in many different industries.

# Summary description

Contains the symbols and functions that you need to draw:

- Circuit diagrams
- Main circuit diagrams
- Assembly drawings
- External connection diagrams
- Single line diagrams
- VVS-diagram, operation and control diagrams

## Project management in ELPROCAD 17

Pro also provides automatic crossreferences, error checking, and automatic generation of various types of reports. Examples:

- Apparatus lists
- Ordering lists
- Estimate sheets
- Drawing lists

### Additional module: ELPROCAD 17 Pro Connect.

Used with ELPROCAD 17 Pro for automatic generation of internal and external connecting documentation in the form of lists and reports. Examples:

- Terminal block lists
- Cable lists
- Internal connection tables
- External connection tables

#### System requirement: ELPROCAD 17.1 Pro functions together with AutoCAD 2015 and 2016.

**Operating systems:** Windows 7, 8 and 10. 32- and 64-bit. Minimum 2GB of internal RAM is recommended.

Can be installed as a single license or as a floating license in the network.

Available in English and Swedish language version.

ELPROCAD



Design You use symbols and functions in

All information about your

drawings and design production in your whole project together in a large

ELPROCAD

are designing. The program then helps you by presenting information confirming your selection. This information can consist of signal and sheet references, cross references, different kinds of reports, apparatus lists etc. according to your specified requirements.

In this product sheet, you can read more about what ELPROCAD 17 Pro can help you with.

## Symbols, drawing environment

The symbols used in **ELPROCAD 17 Pro** are in accordance with the item designation standard IEC 1082 and the symbol standard IEC 617. The program supports both the functionand location-oriented drawing modes. In addition, it is provided with functions enabling the user to make his own symbols, drawing forms, document forms and scales.

Symbols are selected directly from tool bars with the help of icons (symbol illustrations) on the button and a tooltip, or from an icon menu with large and clear symbol illustrations with explanatory text, presented in a dialog box.

Connection lines are automatically opened when a symbol is inserted and reinstated if the symbol is moved or erased.

#### When inserting a symbol in your drawing, you can see...

- the material and apparatus available in your apparatus database and then select that you decide to use. You can add to or otherwise revise your selection during the progress of the work.
- · which main and auxiliary contacts are available in a specific contactor etc.
- which item designations have been used in the current project.
- which apparatus cabinet names (locations) have been used in the project.

You can specify that item designations, terminal block numbers etc. are to be incremented automatically when you insert new symbols. Additionally the program will remember the values that are usually the same for multiple

symbols, such as the placement. Most often they are only approving the values, which makes your drawing significantly.

Apparatus database.

Here is information abo the materials that your

ELPROCAD keeps track of

selected material from your drawings and the complete information on the equipment

database. All informationis

then compiled using the project database and used to generate reports and lists.

available in the device

companyuses.

If you right-click on a symbol, line or text, a selection of functions for this object is pre-

Information about the symbols, (attributes) is handled effectively in ELPROCAD 17 Pro You can sort and replace attribute text for all of a group of symbols which you have marked. You can also localize and replace a complete text string anywhere in your project documentation.

You can obtain a preview in the PLC dialog showing the exact appearance of the I/O module before you insert it in the drawing. You can also save the appearance of the I/O module and import and export I/O lists.



You can predefine the main and auxiliry contacts with terminal designations in a contactor, circuit breaker or protective motor switch etc. in the apparatus database. This means that the correct contact symbol is automatically drawn when the main symbol is inserted.





LPROCAD 17 Pro

ANALYZING

When the circuit diagram is ready, you can import apparatus to the assembly drawing where the components are drawn to scale with the dimensions specified in the apparatus data base.

It is very easy to create your own symbols that you can easily organize, replace and remove. This way you can create menus of your own symbols just as you want them.

There is a search function that allows you to search and locate among the symbols that come with the program.

To facilitate moving between drawings and see which drawings in the project there is a special dialog box with tabs, which can be open all the time you work with the drawing.

Drawing environment and project windows can be open simultaneously, which makes it particularly effective to work with two screens.

In the dialogue for error reports can be directly read out what the error codes mean. You can filter the errors messages so that you can find easily among them. The dialogue can be open while you work and correct any errors.

nalysis	Exter	mal connections Internal connections Control Fu	nction Cro	ss Reference			
- E	rror	Description	Sheet nr.	Sheet nr.	Item Designation	Terminal	Handle
1 )	(R 1	Multiple def of terminal/contact	001	001	Q02	13	@31E
2)	(R 5	Conflicting terminal order contact/ref not same	001		Q02	13	
3)	(R 8	Contact without matching contact image	001		Q02	13	
KR 1		Multi-use of terminal /contact					

## Project management etc.

By using the functions of *Filter, Find* and *Replace*, you can provide a very powerful way to edit data directly in project database.

The project automation dialog enables you, for examples, to insert cross references and to print all or any sheet as required. You can also run scripts, program macros such as, for examples, replacing drawing forms, changing the language of the commentary text or replacing a text in the title block of all the sheets in the project.

Sheet no	Description Operating circuit diagram Main circuit diagram	l▼ ×ref	© AI ⊂ AI ⊂ AI	Marked
< [				E dit script
	the analysis (• WMF file (lower resolution	C EME file (biob	er resoli	ution

The basic settings for the program are saved in each project. The settings for colour, texts, form types, symbol standard and apparatus databases are saved together with such project information as client identity, project name and drawing number. When inserting drawing forms and when assembling reports, this project information is automatically written in the title block.

## Cross references

**ELPROCAD 17 Pro** creates cross references on-line for signals, relay coils, contacts etc. and automatically adds continuation sheet numbers to the title blocks of preceding drawings. Signal references and cross references include both sheet number and coordinates on the drawing e.g. 002/8A. You can go to the relevant signal or symbol if you right-click on a reference.

	Database: Examp	ple.tds Edit / Add
	T	
T 1	Туре	1
Гуре 1	Designation	3-PHASE MOTOR
tem designation M01	Manufacturer	SEW
Terminal designation 1 U	Type/no	DV132 S4
Ferminal designation 2 V	El.data	5,3 kW
Terminal designation 3 W	Dimension	-
location EXT	Supplier	
Accessories ,	Store/Order	
Database .	Price	
Gerves	Contacts	
Vote -	Accessories	
Text M	Designation2	
Fext1 4A	Designation3	
Fext2 5.3kW	Designation4	
	Designation5	
< III		

The program can perform and present a complete cross reference analysis, check that apparatus and contacts have not been used previously and report any error detected. The error on your drawing will be indicated if you click on the line in the report relating to the error.

**ELPROCAD 17 Pro** has a unique sheet reference function. If you mark, for example a relay coil in the drawing, all of its contacts will be shown in a list which can be sorted in different ways. If you point to a contact in this list, the program changes the sheet on the display and points out the symbol. This feature is of particular value to designers and for fault tracing.

### Reports

**ELPROCAD 17 Pro** provides you with a good overview of your designs by assembling the material you select in different types of reports . You can simply modify all these reports by rightclicking and choosing to delete a column or to add a new column.

You can change column headings, column widths or filter the contents of a column. You can go to the corresponding symbol on your drawing by right-clicking an apparatus in a report.

8 C D I	E G H I I K	LMNOPOR	STUVW	X X Z AA	24 34 34 GA 34 GA	
Last change 20 Item designat		Manufacturer	TypeWo		ELdata	Sheet
661	The Swar Secure	ADD Control	18,010.16		0.1.0.504	142
002	THERMAL PROFILE	ABB College	125 DU 0.16		0.1-0.504	1002
002	CARMET	ADD CORDS	25 00 0.16		0.1-0.104	002
101	UNDER STATE	Telenevasione	MS C/2 HD		111.V	107
F02	SIN CR BREAKER	Temperangue	M3 CHE HD		111.1	942
F20	NIN CO DECARTO	Teenecanque	MG C10 HD		118.0	942
001	SCMALLAND	Telemecanique	X 630		240/00 20/	001
P92	SGNAL LANP	Telemecanique	X1-30		24VDC 2W	001
1933	SCHOLLARP	Televeration	X1.33		26/00 20	601
604	SCOOL LOOP	Teterecanizat	X1.33		20/00 20	601
001	MAN CONTYN	STRIAGE O	8(453)-63		400.6000	0.02
002	CONTACTOR	ADD Control	033,33,60		238/40/2588	201
	50027	APP Control	4425/254		12501	
	API P CORT MI	APP Control	CA7-12		ta.	
023	CONTACTOR	ARR CONTROL	632.32.02		232/06/2588	601
Gen	de rise des Titres	Monther Electric	287		Dally of	201
562	PUCH BUTTON	Noaler Dectric	23EV		248V AF	201
501	2 ISH SUTTON	Moder Flering	236V		24TV AC	201
524	PUSH BUTTON	Moder Flexible	2771		2427 45	201
2003	SCET STARTER	Mander Flexible	MXT1.400			602
X01 (6 at)	TERMINAL BLOCK	RUPPON	SAK2.505		25A	
1				1	JOA NUMBER	DOLUNG MIL
1				Example	400.00	Drawing no.
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1			PROCAD	CI	N.N.	NN D
1			Jemly	Accuratus list	Durr.	807 009
					Date	

The reports can be printed directly in Excel format for further processing if desired. When you insert a symbol in your drawing, you select the apparatus, including any accessories, directly from the apparatus database.

You can select material for your project which is not to be shown on your drawing, but which is to be included an ordering list, to obtain as complete a list as possible. Have you changed the material involved in your electrical diagram use the function *Analysis*. This means that the project is updated and all reports will contain your new materiel.

Apparatus database, update itself with your most common materiel from your suppliers. You can use multiple databases in a project or different databases for each project.

### Communication

It is easy to transfer information from **ELPROCAD 17 Pro** to other programs:

- Other programs in the ELPROCAD-family are completely compatible with the drawings prepared with **ELPROCAD 17 Pro**.
- The drawing files follow the AutoCAD standard format (.dwg) and can therefore be used with different AutoCAD-based programs.
- The import/export function permits communication with most of the betterknown database programs, Approach, Access, Excel etc.
- **ELPROCAD 17 Pro** The import/export function permits communication with most of the better-known database programs, Access, Excel etc.
- Document links can be created to external documents to appear in the device database.

# Help

Even if the program is easily used, assistance may be needed at some time. The program is supplied with a detailed User's manual and a training brochure with appropriate exercises.

## **Interested?**

If so, contact your dealer or us at PROCAD Systems for more information.

Dealer:
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