



# Premium Plant Library – PPL

## The VGB-compliant power plant library for PCS 7



SAR provides complete solutions from a single source – including process engineering – based on customer specifications and incorporating in-house developments and products. At SAR, interdisciplinary teams of specialists with high levels of commitment and personal responsibility design and develop projects.

From the analysis of current plants, process concept creation, and development of new solutions, to start-up and maintenance, SAR guarantees that its consistently high-quality solutions deliver high investment security and future viability.

### SAR Environmental Technology

SAR is a well-known, independent system supplier with 400 employees at a number of different national and international locations. Since 1985, SAR has implemented projects in the areas of power plant and energy technology.

The company has many years of experience in automating industrial power plants and waste-to-energy, biomass, and refuse-derived fuel plants.

### Process control systems

SAR designs and supplies process control systems for power plant and energy technology:

- High availability
- Fail-safe implementation
- Redundancy
- Long-term archiving and operational data collection
- Remote maintenance, training, and service

### PPL features

- Verified VGB compliance
- Typical power plant operational and functional standards
- Includes the latest PCS 7 features
- User interface for OS systems, operator panels, and miniaturized control room equipment
- Online documentation for modules and faceplates
- Disable/enable functions for OS and OP operation
- Start-up mode
- Analysis of relevant operating data (operating hours, switching cycles)
- Interface for operating data management
- Support for different types of switching device (with and without lock)

- Two-step operation
- Visualization of enabling and protecting logic
- Power-plant-specific correction calculator
- Compatible with all PCS 7 versions from 7.0
- Optional replacement of PCS 7 PS library with PPL library
- Freely available on the market

Our specialists know and understand the different, complex processes involved in energy and power plant technology. Their expertise ensures professional project design and fail-safe implementation, leading to an immediate independent start-up.

Our abilities and our knowledge apply to the plant as a whole. We provide additional services above and beyond our technical expertise.

They include quality and project management, risk analysis (SIL determination), functional planning, and support during official certification.

### Siemens PCS 7

With around 8,000 installations spanning the globe, PCS 7 is one of the world's most widely used process control systems. Unlike other solutions, PCS 7 is freely available on the market. It can be designed and supplied by independent, certified system integrators.

### Certified PCS 7 specialist

Siemens has designated SAR a “certified specialist” for PCS 7. Only companies that possess outstanding system knowledge and verifiably well-founded, comprehensive process knowledge in the areas of energy and environmental technology and process engineering receive this distinction. Key goals for certified specialists are high plant availability and a high degree of plant efficiency as a result of optimal utilization of the resources available.

This certification gives SAR direct access to the PCS 7 development team. When it comes to new developments and implementing innovative technologies, SAR has all of the information required – in advance. SAR uses this to its advantage to ensure the success of new applications and new solutions.

Together with its certified companies, Siemens guarantees a consistently high level of quality for complex plant installations, as well as for customer service.

### VGB standards

The R170 B0-B6 VGB guidelines describe and define the power generation sector in regard to operating philosophy, availability, and system partitioning.

The PCS 7 libraries available at this time either do not completely meet the specifications of the VGB guidelines, are no longer state of the art, or are no longer maintained in the latest PCS 7 versions.

Therefore, SAR collaborated with E.ON Plant Services to develop a special power plant library, Premium Plant Library (PPL), which complies with all of the VGB specifications and maps the complete range of functions of a modern power plant library.

### Premium Plant Library – PPL

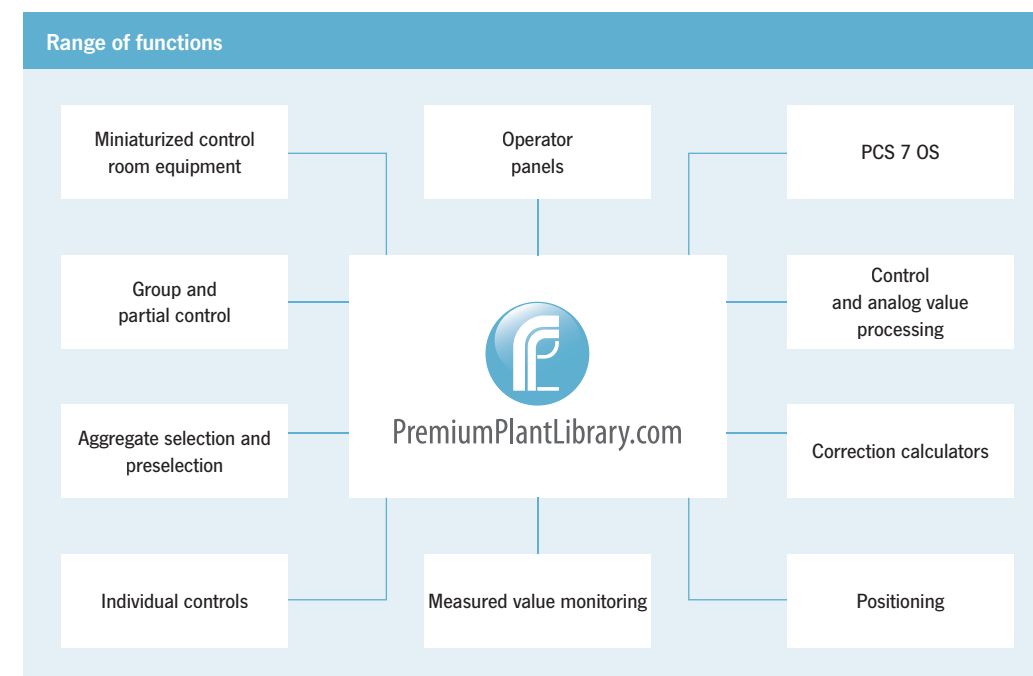
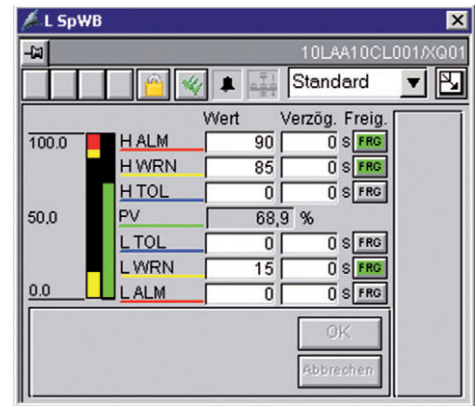
A uniform operating structure, combined with power-plant-compliant display forms and functions, allows PPL to deliver efficient plant management. PPL completely supports the PCS 7 internal diagnostic functions for quick troubleshooting. The enabling, protecting and interlocking logics are visualized and displayed clearly. Strict compliance with the specifications for developing PCS 7 libraries allows unrestricted migration to new versions. New system functions can be integrated at any time.

Special modules enable a variety of sensors, actuators, and switching devices to be individually integrated. For example, variable-speed drives with fieldbus interfaces or switching devices with intelligent motor controller modules are supported.

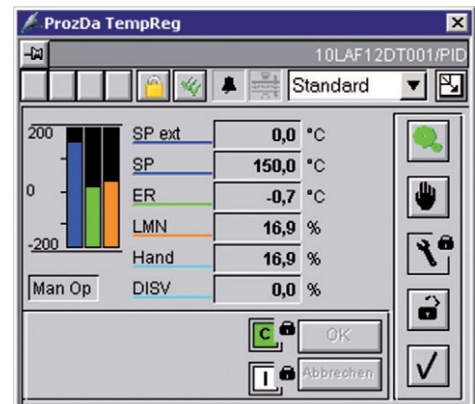
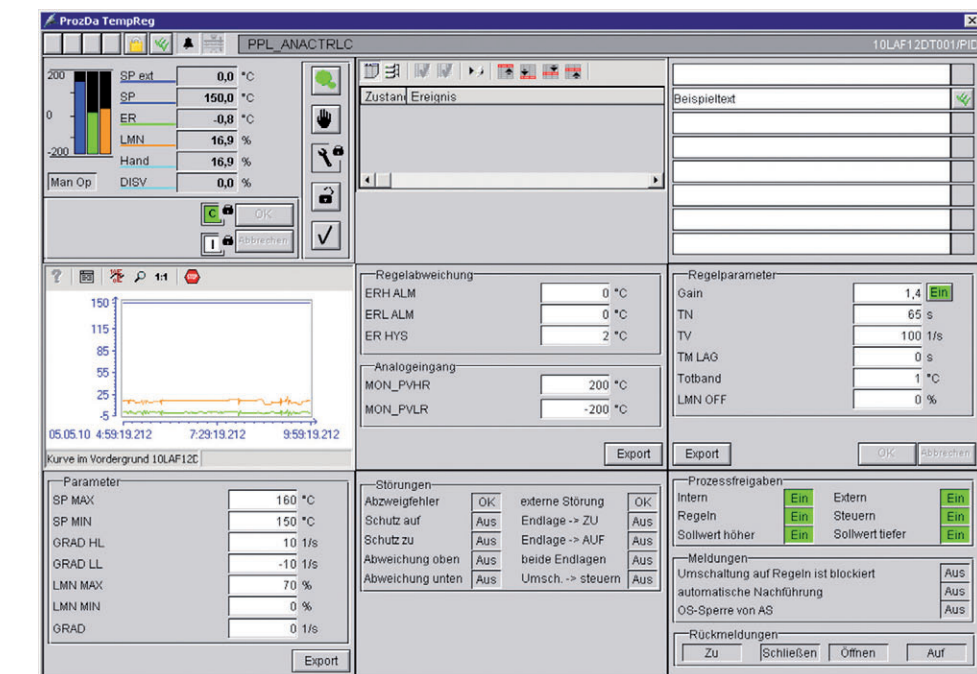
The optimized display form in the standard views supports efficient plant management. It is easy to learn to use the operating and monitoring functions because the icons and symbols are self-explanatory.



Because information and input values are clearly shown in the loop displays, it is possible to carry out most of the maintenance and optimization work without the help of the engineering environment. The system status and the transition and locking conditions are all visualized.



The new PPL PCS 7 library for the power plant and energy sector in accordance with R170 VGB guideline.





PremiumPlantLibrary.com

## Module overview

Function	Family	Module name
<b>System modules</b>		
1 Warm-up module	SYSTEM	WARM-UP
<b>Individual control elements with panel section modules</b>		
2 Controller (ESG), motor	DRIVE	MOTDRV
3 Remote control module, motor	TABLE	MOTDSK
4 Controller (ESG), solenoid valve	DRIVE	VALDRV
5 Remote control module, valve	TABLE	VALDSK
6 Controller (ESG), actuating drive	DRIVE	SRVDRV
7 Remote control module, actuating drive	TABLE	SRVDSK
8 Controller (ESG), reversible drive/belt drive	DRIVE	BLTRDV
9 Remote control module, belt drive	TABLE	BLTDSK
10 Controller (ESG), motor with two speeds/directions of rotation	DRIVE	MOT2DRV
11 Remote control module, motor with two speeds/directions of rotation	TABLE	MOT2DSK
12 SIMOCODE	DRIVE	SIMOC
13 SIMOVERT	DRIVE	SIMOV
14 SIPOS5	DRIVE	SIPOS
<b>Control functions with panel section modules</b>		
15 Group control module	SEQUENCE	SKCMD
16 Remote control module, sequencer CMD	TABLE	SKDSK
17 Subgroup control module	DRIVE	SUBCMD
18 Remote control module, partial control	TABLE	SUBDSK
19 Aggregate selection	DRIVE	AGGSEL
20 Remote control module, aggregate selection	TABLE	AGGDSK
21 Aggregate preselection	DRIVE	SELECT
<b>Binary modules</b>		
22 Constant binary	KONST	CONSBIN
23 Indicator	BINARY	BINLOG
24 Digital monitoring module	BINARY	BINMON
25 8x digital monitoring module	BINARY	BINMON8
<b>Analog modules</b>		
26 Constant analog	KONST	CONSANA
27 Analog monitoring module	ANALOG	ANAMON
28 Analog display	ANALOG	ANADISP
29 Analog selection	ANALOG	ANASEL
30 Analog switch	ANALOG	ANASWIT
31 Limiter	ANALOG	ANALIMIT
32 PT1 element	CONTROL	ANAPT1
33 Nonlinear filter	CONTROL	ANANLFIL
34 Deadband	CONTROL	ANADEADB
35 Sliding averaging	CONTROL	ANAASVSL
<b>Control functions</b>		
36 Continuous controller	CONTROL	ANACTRLC
37 Step controller	CONTROL	ANACTRLS
38 Ramp function generator	CONTROL	ANARAMP
39 Analog set point	CONTROL	ANASET
40 Differentiator	CONTROL	ANADIF
41 Analog value input with limit	CONTROL	ANAEDIT
<b>Correction calculators</b>		
42 Enthalpy calculator	TECH	ENTHALP
43 Correction calculator, steam flow	TECH	STEAM COR
44 Correction calculator, gas flow	TECH	GAS COR
45 Correction calculator, level	TECH	HIGH COR
46 Correction calculator, water flow	TECH	WATER COR



**HEADQUARTERS**

SAR Elektronik GmbH

Gobener Weg 31

84130 Dingolfing

Germany

Tel.: +49 (0)8731 7040

Fax: +49 (0)8731 7740

info@sar.biz

[www.sar.biz](http://www.sar.biz)