Global energy resources are increasing in scarcity and price. There is increased pressure for industrial facilities to minimize power costs and operational costs through improved monitoring and control.

The application of a cost effective and modular power management system ensures future economical and efficient utilization of energy resources. SIMATIC WinCC/PCS 7 Powerrate provides this solution with an overview of a system’s power consumption through complete integration into existing SIMATIC SCADA systems.

The SIMATIC Power Management offering provides three unique methods of integration. Each designed to meet the customers current and future Power Management needs.

Basic Power Monitoring by manually integrating the Siemens PAC meters using their associated GSD files. The data screens will be configured using the standard WinCC tools for this method.

Full Siemens PAC meter integration is supplied with the SIMATIC PCS 7 Library PAC meters, providing a fast and easy integration solution. This device specific add-on software provides:
• SIMATIC S7 function blocks already constructed
• Pre-configured faceplates for all PAC meter values

A complete Power Management Integrated solution provides the SIMATIC WinCC/PCS 7 powerrate software with the WinCC/PCS 7 targeted systems. This includes the following:
• Power and Energy management functions through pre-built software libraries
• Power and energy consumption detection and visualization with customized objects (i.e., faceplates, graphic templates)
• Demand monitoring
• Load management with pre-defined power limits and a load list with priorities and load specific settings
• Time synchronization
• Excel cost center module supporting tables and bar charts
• Reporting SIMATIC WinCC/PCS 7 powerrate

SIMATIC WinCC/PCS 7 powerrate processes data provided by a variety of sources: Profibus devices like power or flow meter, signals via digital inputs like pulses or analog signals.

Power and Energy Monitoring Functions
Power values are standardized, visualized and archived as average values and are time stamped according to the selected period.
Evaluations of standard load curves, visualized via WinCC/PCS 7, provide the user with a fast and detailed overview of consumption values.

Using the macros in the WinCC/PCS 7 powerrate software, Excel reports can be easily designed showing allocation of energy costs over multiple cost centers. These reports will allow consumption or accrued costs to be compared and analyzed for potential energy savings.

The integrated load management function assures that the overall power consumption of a plant stays below the KW demand target. This could avoid costly demand penalties and lower the overall energy bill. Up to 100 loads can be controlled using the settings in the priority list. Specific setpoints for the loads, such as, min/max ON or OFF times or nominal energy consumption can be set up in the faceplates of the HMI system.

System Architecture
The software collects the plant's consumption data via field buses. The S7 PLC compresses (averaging) and store them in the memory for consistency in case of communication losses. WinCC/PCS 7 visualizes the data in a comprehensible form for the user, either in graphics, tables or reports, etc. In the HMI system, energy data is stored in the online archive of WinCC/PCS 7.

Get more information
Description
SIMATIC PCS 7 powerrate V 2.0 Engineering + (1) AS runtime license:
SIMATIC PCS 7 powerrate V 2.0 (1) AS runtime license:
SIMATIC WinCC powerrate V 2.0 Engineering + (1) AS runtime license:
SIMATIC WinCC powerrate V 2.0 (1) AS runtime license:
SIMATIC PCS 7 Library PAC 3200 V1.0 Engineering+(1) AS runtime license:
SIMATIC PCS 7 Library PAC 3200 V .0 (1) AS runtime license:

Order Number
3ZS2785–1CC20–0YG0
3ZS2785–1CC20–6YH0
3ZS2795–1CC20–0YG0
3ZS2795–1CC20–6YH0
3ZS2781–1CC10–0YG0
3ZS2781–1CC10–6YG0

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