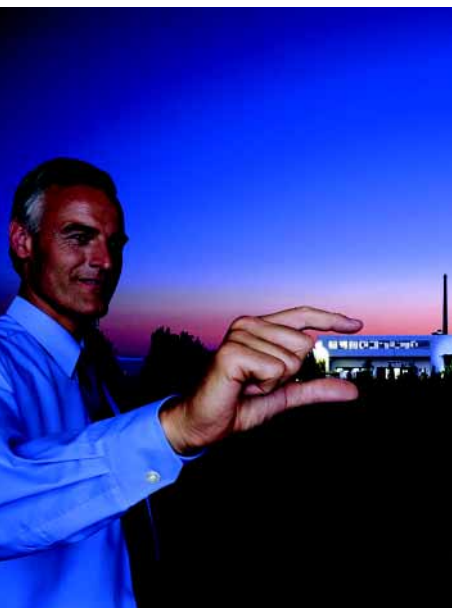


Power Management System

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Power Management System

System overview

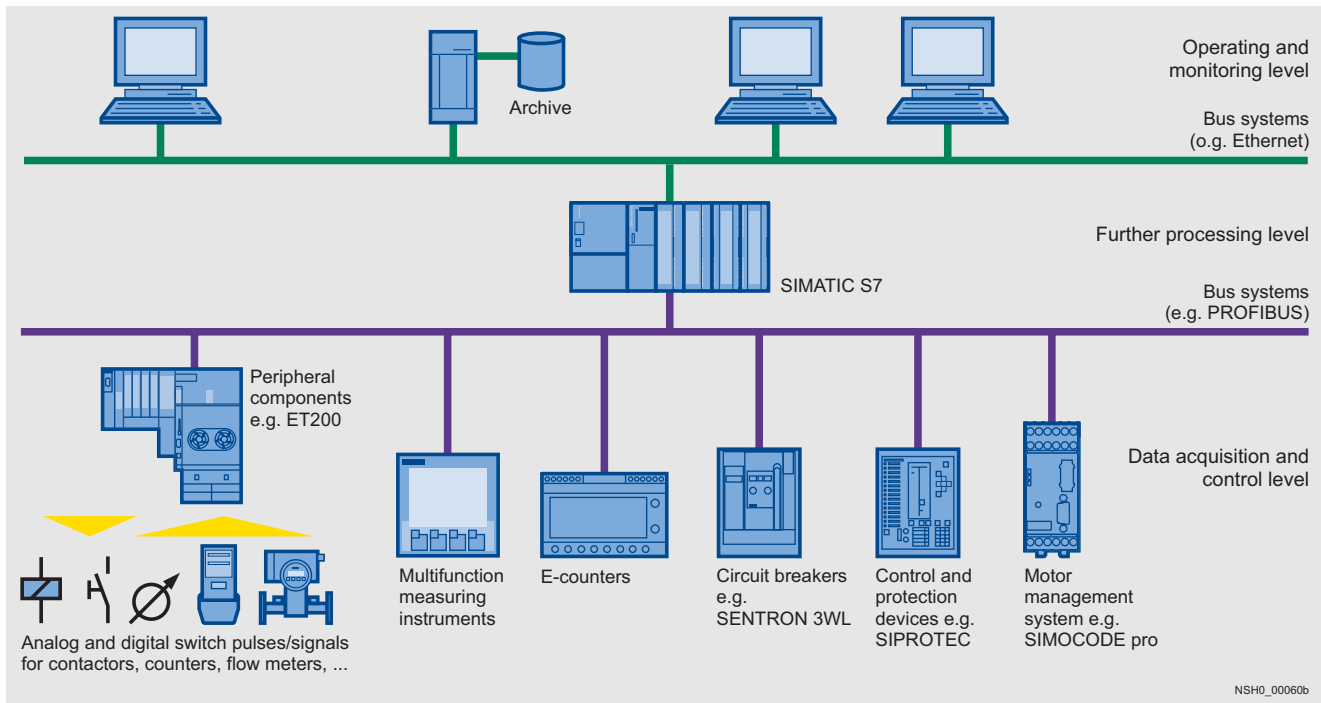
- 13/2 - Overview
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Power Management System

System overview

Overview



The increase in power prices over the past few years has led to higher operating costs and can pose a threat to a company's competitiveness.

The goal of the Power Management System is to optimize operating costs and increase plant availability.

The system is based on service-proven industrial technology and meets special demands of quality and availability. As an element of Totally Integrated Automation and Totally Integrated Power, the power management system guarantees the consistency of products and systems, the use of standard components, a uniform operating philosophy and a reduced amount of engineering work.

In other words: With Power Management you can make full use of all the potential for optimization provided by a consistent power management solution.

Various power distribution products can be integrated in the Power Management System. They include hardware and software components such as the SIMATIC powercontrol power management software, multifunction measuring instruments, SENTRON communication-capable circuit breakers, the SIMOCODE pro motor management system, E-counters or protective devices such as SIPROTEC.

Apart from performing their initial function of protecting the power distribution, modern communication-capable switching and protecting devices are also able to deliver additional information such as device status, setting parameters and measured values.

Non-communication-capable field devices are connected to the PROFIBUS through I/O modules such as the ET200. The related power data are thus made available with the help of pulse inputs or converters and the device status is recorded through digital I/Os.

Recording the consumption data of other types of energy is possible using suitable measuring equipment through the central or distributed peripherals of the SIMATIC S7.

Components for the Power Management System

The power management system comprises both hardware components and software components.

The hardware components are:

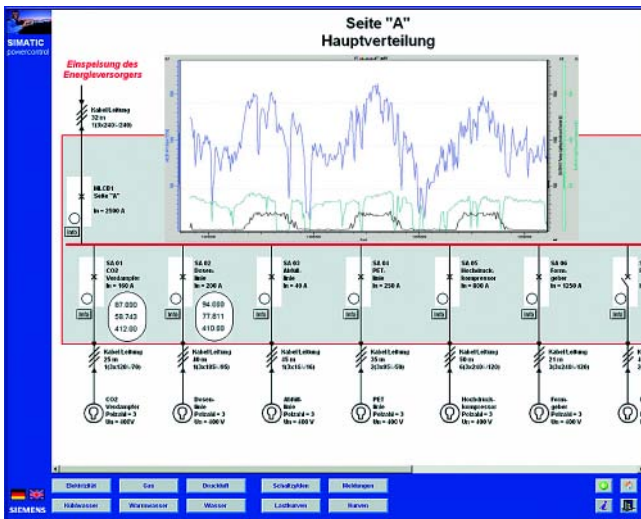
- Multifunction power meters for measuring the power data
- Communication-capable switching and protection devices
- SIMOCODE pro motor management system
- E-counters
- Protective devices such as SIPROTEC

The software components are:

- SIMATIC powercontrol power management software
- SIMATIC powercost

Software components

SIMATIC powercontrol



SIMATIC powercontrol throws light on power flows - from infeed through distribution to loads - in order to permanently reduce the operating costs of power distribution systems:

- Central overview of all the power flows in a power distribution system
- Detailed overview of all switch states
- Knowledge of the demand profile from the continuous acquisition of power data
- Detailed consumption information and load-related assignment of amounts of power and costs
- Display and archiving of the consumption values, e.g. as 15-minute mean values
- Combination of different power types in one tool

SIMATIC powercost

Cost Center / Utility	Consumption	Total Consumption	Cost €	Total Cost €
CC_Root				
Gas	0 m³	705.075 m³	0	2.468.250
Electricity	0 kWh	529.550 kWh	0	1.410.150
CC1			470.050	940.100
Gas	235.025 m³	470.050 m³	470.050	940.100
CC1_1			470.050	470.050
Gas	235.025 m³	235.025 m³	470.050	470.050
CC2			529.550	529.550
Electricity	264.775 kWh	529.550 kWh	529.550	1.059.100
Gas	0 m³	235.025 m³	0	470.050
CC2_1			529.550	529.550
Electricity	264.775 kWh	264.775 kWh	529.550	529.550
CC2_1			470.050	470.050
Gas	235.025 m³	235.025 m³	470.050	470.050

SIMATIC powercost is the cost center module of SIMATIC powercontrol for automatic and load-related assignment of power and costs to individual company units:

- Low-cost, secure, and load-related energy assignment
- Flexible and transparent cost determination
- Easy and open display of results

More information

More information about the software components of the Power Management System can be found in Chapter 18 and on the Internet at:

<http://www.siemens.com/powermanagementsystem>

Power Management System

Notes

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