

SIEMENS



SENTRON

7KT/7KM PAC Measuring Devices

A device to suit every requirement

Fully informed at all times – thanks to intelligent measuring technology

The 7KT/7KM PAC measuring devices ensure precise and reliable measurement of power values for infeed, outgoing feeders and individual loads. For further processing of measurement data, the devices are equipped with a wide range of communication options for easy integration in higher-level automation and power management systems.

Universal – worldwide

The portfolio covers measuring devices for every requirement: from simple power measurement through to the monitoring of system status and power quality. A user-friendly and intuitive menu ensures easy commissioning of the device. Universally and globally applicable – thanks to international approvals.

Highlights

- Fast commissioning via intuitive menu
- Easy system connection to higher-level automation and power management systems
- Global application in accordance with IEC/EN and UL norms

Answers for infrastructure.

Measuring Devices and Power Management

Energy Management

PC-based power management system

Overview



Components of the PC-based power management system

Power management system with the SENTRON product family

The SENTRON product family offers the user not only power management software in the form of SENTRON powermanager but also the corresponding hardware in the form of 7KM PAC measuring devices and 3WL/3VL circuit breakers for the realization of a complete power management system.

The components are optimally coordinated with each other. For example, special drivers for the SENTRON devices are integrated in the powermanager software so that on the one hand the power data acquisition can take place without any great configuration effort and, on the other hand, the most important measured values or states are indicated by predefined displays.

This reduces the engineering work for the customer and gives the user the assurance of knowing that the device functions are optimally supported in the software.



User interface of powermanager

Power management software powermanager

The power management software powermanager is at the heart of the PC-based power management system and

- is independent power management software
- can be operated using a PC and measuring devices with Ethernet connection
- is expandable from the simple standard application to a fully flexible customer solution
- is fully scalable with regard to the number of devices and to the software's functions
- ensures the optimum integration of measuring devices from the 7KM PAC range, 3WL/3VL circuit breakers and other devices

The powermanager energy management software includes a client/server installation for recording, preparing, displaying and archiving power data. These power data are supplied primarily by 7KM PAC measuring devices or 3WL/3VL circuit breakers, which are connected to the system through Ethernet.

The powermanager software is available in the "Expert", "Web" and "Distributed Systems" option packs.

Benefits

- Transparency of power flows
- Exact knowledge of the consumption profile
- Increase of power efficiency
- Optimization of power supply contracts
- Compliance with contractual terms
- Assignment of power costs to cost centers
- Optimization of plant maintenance
- Identification of critical plant conditions

Field of application

The PC-based energy management system is used wherever power flows need to be transparently displayed and monitored.

Industries

Energy efficiency thanks to power management with consistent monitoring and the resulting optimization measures is important for all industries, e. g. in the manufacturing industry, in non-residential buildings, in the field of services, and in infrastructure projects. This has a particular impact on competitiveness, particularly in view of rising energy prices.

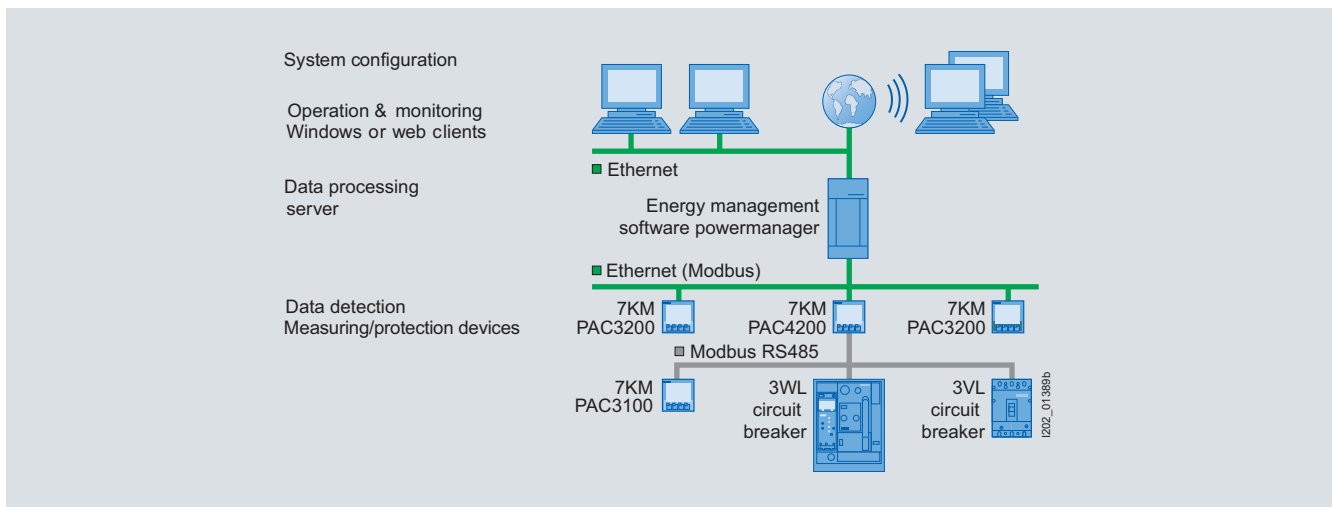
System configuration with powermanager

- Integration of measuring devices by means of predefined device templates for the 7KM PAC family and the 3WL/3VL circuit breakers
- Easy integration of existing modbus-capable detecting devices
- Communication through Standard Ethernet
- Integration of devices with RS 485 interface (ModbusRTU) through Modbus gateway, e. g. the 7KM PAC4200 measuring device can be used as gateway

Measuring Devices and Power Management

Energy Management

PC-based power management system



System overview

More information

Hardware components

The hardware components of the PC-based energy management system are

- the 7KM PAC measuring devices in this chapter
- the open 3WL circuit breakers in Catalog LV 10.1 · 2012, Chapter 1
- the 3VL molded case circuit breakers in Catalog LV 10.1 · 2012, Chapter 2

Software

The software for the PC-based power management system is powermanager, see Catalog LV 10.1 · 2012, Chapter 13, "Configuring, visualizing and controlling with SENTRON".

Internet

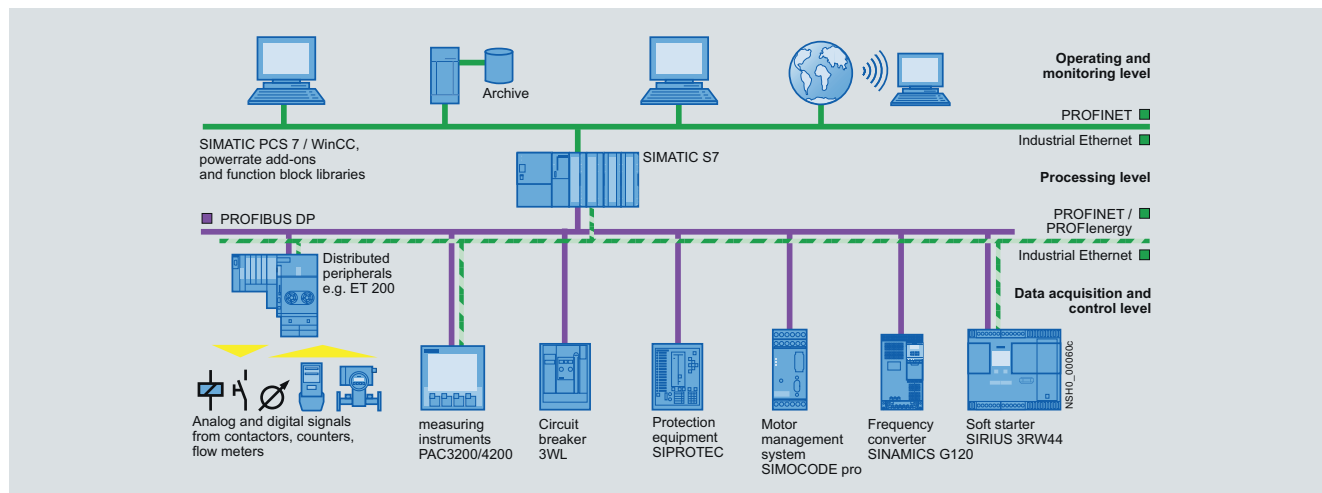
You can find more information on the Internet at:
www.siemens.com/lowvoltage/energymanagement

Measuring Devices and Power Management

Energy Management

SIMATIC-based power management system

Overview



SIMATIC-based solutions for the process and manufacturing industry

Besides the high level of automation, a key feature of the process and manufacturing industry is a very high power consumption. It is only natural, therefore, to integrate an energy management system in the existing systems. The add-on SIMATIC powerrate for WinCC and PCS 7 makes it possible to provide transparency and control in power distribution and energy costs.

Integration of switching, safety and measuring devices

For complete integration of low-voltage power distribution components in process and SCADA systems, PROFIBUS DP interfaces and function block libraries are available, e. g. the PAC3200 function block library for SIMATIC WinCC and PCS 7. The software add-ons can therefore be used to display all the data supplied from the devices without major engineering work.

PROFINET and PROFInergy

An increasing number of devices in automation technology offer PROFINET. There is also a Switched Ethernet PROFINET module for the 7KM PAC3200 and PAC4200 measuring device.

PROFInergy is a "Common Application Profile" from the PNO. Thanks to PROFInergy it is possible to assemble an energy management system with standardized device interfaces.

Benefits

- Increased energy efficiency due to exact knowledge of the load profile
- Optimization of power supply contracts
- Assignment of power costs to cost centers
- Optimization of plant maintenance
- Identification of critical plant conditions
- Reliable monitoring of the power limit through automatic load management

More information

Hardware components

- the 7KM PAC measuring devices in this chapter
- the open 3WL circuit breakers in Catalog LV 10.1 · 2012, Chapter 1
- the 3VL molded case circuit breakers in Catalog LV 10.1 · 2012, Chapter 2

SIMATIC powerrate

The SIMATIC powerrate software is at the heart of the SIMATIC-based power management system and

- is an add-on to PCS 7 and WinCC which throws light on power consumption from the infeed to the load
- continuously collects, archives and processes power data
- creates a load profile and works out potential savings based on exact knowledge of the load profile
- monitors the contractually agreed power limit
- enables the exact recording and evaluation of power consumption per batch through batch-related consumption recording
- enables the monitoring or indication of switch status and, with suitable authorization, remote switching
- shows selected measurements online and messages from the 7KM PAC3200 and PAC4200 measuring devices
- collects archived data, which can be exported to Excel and presented in various reports

Field of application

The SIMATIC-based energy management system is used wherever power flows need to be transparently displayed and monitored, and also where it is necessary to effectively intervene above the process control level.

Industries

SIMATIC powerrate is used in all areas in which PCS 7 or WinCC is used and energy efficiency considerations play a major role.

Software components

- SIMATIC powerrate
- PCS 7 function block library PAC3200
- WinCC function block library PAC3200

All software components can be found in Catalog LV 10.1 · 2012, Chapter 13.

You can find more information on the Internet at:
www.siemens.com/lowvoltage/energymangement

Overview

Precise measuring with 7KM PAC3100, PAC3200 and PAC4200



The 7KM PAC measuring devices:
PAC3200 (left), PAC3100 (center) and PAC4200 (right)

The 7KM PAC measuring devices are used to measure and indicate all relevant network parameters in low-voltage power distribution. They can be used for single-phase measurements as well as for multiphase measurements in 3 and 4-conductor networks (TN, TT, IT).

Power values for main distribution boards, electrical feeders or individual loads are recorded precisely and reliably, and important measured values are supplied in addition for assessing the state of the plant and the quality of the network.

More information

More information is available on the Internet at:
www.siemens.com/lowvoltage/energymanagement

Benefits

7KM PAC measuring device, general

The common features of all measuring devices in the 7KM PAC series:

- Simple mounting and commissioning
- High IP65 degree of protection (front side, when installed) permits usage in extremely dusty and wet environments
- Intuitive operation using 4 function buttons and multilingual plain text displays
- Easy adaptation to different systems using integrated and optional
 - digital inputs and outputs
 - communication interfaces
- Worldwide use
 - min. 8 languages
 - international approvals
 - developed and tested to European and international standards
- Low mounting depth

7KM PAC3200 and 7KM PAC4200 measuring device

Additional performance characteristics of the 7KM PAC3200 and 7KM PAC4200:

- Precise energy recording
- Versatile system integration
 - integrated Ethernet interface
 - optional communication modules available
 - multifunctional digital inputs and outputs
 - limit value monitoring
- Can be directly connected to power supply networks up to 690 V AC (UL-L), CATIII without voltage transformer
- Easy-to-use configuration software included as standard

7KM PAC4200 measuring device

Additional performance characteristics of the 7KM PAC4200:

- Monitoring the plant status and the system quality
 - basic information for evaluating network quality
 - logging of plant history in the form of operation, control and system-related events
- Recording of the power range through power averaging (load profile)
- Daily energy meters for apparent, active and reactive energy across 365 days for cut-off date assessment
- Detection of gas, water, compressed air or other energy sources via pulse counter to the digital inputs
- Can be expanded using modules to up to 10 digital inputs and 6 digital outputs
- Meters for apparent, active and reactive energy for the precise detection of the power consumption of a partial process or manufacturing process
- 10/100 Mbit/s Ethernet interface with gateway function for the easy connection of devices with serial RS 485 interface via 7KM PAC RS485 expansion module to an Ethernet network
- Comprehensive convenience indicators, such as user-defined displays, bar and status indicators, phase diagram and list and histogram graphics

Satisfies the accuracy requirements of class 0.2S high-precision meters used by power supply companies according to IEC 62053-22, which are normally reserved for exacting industrial applications.

Measuring Devices and Power Management

7KM PAC Measuring Devices

Introduction

Technical specifications



Device versions		7KM PAC3100	7KM PAC3200	7KM PAC4200
Basic measurement variables				
Voltage, current		✓	✓	✓
Neutral conductor current		✓	--	✓
Apparent power, active power, reactive power, power factor		✓	✓	✓
Power factor of the fundamental wave		--	--	✓
Frequency	Of the reference phase	✓	✓	✓
Min/max values	Slave pointer function with date & time	✓ --	✓ --	✓ ✓
Power measurement				
Apparent energy		--	✓	✓
Active energy, reactive energy	Input Output Balance	✓ ✓ ✓	✓ ✓ --	✓ ✓ --
Number of tariffs	Apparent, active and reactive energy	1	2	2
Daily energy values for 365 days	Apparent, active and reactive energy	--	--	✓
Consumption recording of a sub-process or manufacturing process	Apparent, active and reactive energy	--	--	✓
Power averages of the last integration period	Active and reactive power average with min / max value	✓	✓	✓
Load profile record		--	--	✓ max. 3840 entries ¹⁾
Power measuring devices for S ₀ signal at a digital input	Electrical energy any energy	-- --	✓ --	✓ ✓
Accuracy class for active energy	According to IEC 62053-21 / 62053-22	Class 1	Class 0.5S	Class 0.2S
Accuracy class for reactive energy	According to IEC 62053-23	Class 3	Class 2	Class 2
Monitoring of state of the plant and quality of the network				
Configurable displays	For presenting up to 4 measured quantities	--	--	4
Operating hours meter	Operating hours of loads	--	✓	✓
Sliding mean values	<i>U, I, S, P, Q, LF</i>	--	--	✓
THD voltage, current		--	THD-R	THD
Distortion current strength		--	--	✓
Phase angle, phase displacement angle		--	--	✓
Unbalance	Voltage current	--	$U_{nba} I_{nba}$ ²⁾	$U_{nb} I_{nb}$ ³⁾
Harmonics in voltage, current		--	--	3. to 31st
Limit value monitoring	Max. number of limit values	--	6	12
Boolean logic	For limit values inputs	-- --	✓ --	✓ ✓
Event memory for operation, control and system-related events	Including time stamp	--	--	✓ (> 4000 events)
Battery backup for min / max values		--	--	✓
System integration and communication				
Ethernet (integrated)		--	10 Mbit/s	10/100 Mbit/s
• Protocol	Modbus TCP	--	✓	✓
• Gateway	Ethernet <--> RS 485 (Modbus)	--	--	✓ ⁴⁾
PROFINET incl. PROFinergy		--	Expansion module optional	
PROFIBUS DPV1		--	Expansion module optional	
RS 485		Integrated	Expansion module optional	
• Protocol	Modbus RTU	✓	✓	✓
4DI/2DO expansion module	Expansion to max. 10 DI / 6 DO	--	--	✓ (max. 2 modules)
Number of expansion modules	Max.	--	1	2
Integrated digital inputs (DI)	Number multifunctional	2 --	1 ✓	2 ✓
Integrated digital outputs (DO)	Number multifunctional	2 ✓	1 ✓	2 ✓
Installation plan				
Dimensions (L x W x D)	In mm	96 x 96 x 56	96 x 96 x 56	96 x 96 x 82
Mounting depth	PAC PAC with expansion module (in mm)	51 --	51 73	77 99
Panel cutout (L x W)	In mm	92 x 92	92 x 92	92 x 92
Standards and approvals				
CE / cULus / C-Tick / GOST		✓	✓	✓
IEC 61557-12		✓	--	✓

¹⁾ This corresponds for example to a duration of 40 days with a measurement period length of 15 minutes.

²⁾ U_{nba}, I_{nba} - Unbalance with regard to amplitude.

³⁾ U_{nba}, I_{nba} - Unbalance with regard to amplitude and phase.

⁴⁾ In conjunction with 7KM PAC RS 485 expansion module



✓ = Available, -- = Not available.

Measuring Devices and Power Management

7KM PAC Measuring Devices


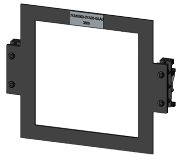
7KM PAC3100 measuring devices

Selection and ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
7KM PAC3100 measuring device		Screw terminals					
  7KM3 133-0BA00-3AA0	A	7KM3 133-0BA00-3AA0		1	1 unit	133	0.325
Control panel flush-mounting instrument 96 mm x 96 mm Screw terminals for connecting current and voltage AC/DC power supply unit with wide voltage range U_{AUX} : 100 ... 240 V AC $\pm 10\%$, 50/60 Hz 110 ... 250 V DC $\pm 10\%$ Measuring inputs U_e : max. 3 AC 480/277 V, 50/60 Hz I_e : 15 A							

Accessories

Accessories for 7KM PAC3100/3200/4200

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
7KM PAC TMP2 mounting rail adapter		7KM9 900-0XA00-0AA0		1	1 unit	133	0.380
 7KM9 900-0XA00-0AA0	A						
Double-tiered adapter for mounting a measuring device on standard mounting rail <ul style="list-style-type: none"> • Display faces forward • For manual intervention 							
7KM PAC TMP mounting plate		7KM9 900-0YA00-0AA0		1	1 unit	133	0.105
 7KM9 900-0YA00-0AA0	A						
Adapter for mounting a measuring device on standard mounting rail <ul style="list-style-type: none"> • Display faces backwards towards standard mounting rail • Read-out and evaluation of measurements solely via mains operation 							

More information

Current transformers

- Suitable current transformers can be found
- in the Catalog LV 10.1 · 2012, Chapter 2, "Molded case circuit breakers"
 - in the Industry Mall, Section:
 - "Industry Automation and Drive Technologies"
 - "Low-Voltage Power Distribution and Electrical Installation Technology"
 - "Protection Equipment"
 - "Molded Case Circuit Breakers"
 - "3VL Molded Case Circuit Breakers"
 - "3VL Molded Case Circuit Breakers up to 1600 A"
 - "Accessories and Spare Parts"

Software components







For more information about the software components see [Catalog LV 10.1 · 2012, Chapter 13](#) and [on the Internet at: www.siemens.com/lowvoltage/energymangement](#)

Measuring Devices and Power Management

7KM PAC Measuring Devices

7KM PAC3200 measuring devices

Selection and ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
 <p>7KM PAC3200 measuring device</p> <p>Control panel flush-mounting instrument 96 mm x 96 mm Screw terminals for connecting current and voltage AC/DC power supply unit with wide voltage range U_{AUX}: 95 ... 240 V AC $\pm 10\%$, 50/60 Hz 110 ... 340 V DC $\pm 10\%$</p> <p>Measuring inputs U_E: max. 3 AC 690/400 V, 50/60 Hz I_E: /1 A or /5 A</p> <p>7KM2 112-0BA00-3AA0</p>	A	Screw terminals 		1	1 unit	133	0.325
		7KM2 112-0BA00-3AA0					
 <p>7KM PAC3200 measuring device</p> <p>Control panel flush-mounting instrument 96 mm x 96 mm Screw terminals for connecting current and voltage DC power supply unit with extra-low voltage U_{AUX}: 22 ... 65 V DC $\pm 10\%$</p> <p>Measuring inputs U_E: max. 3 AC 500/289 V, 50/60 Hz I_E: /1 A or /5 A</p> <p>7KM2 111-1BA00-3AA0</p>	A	Screw terminals 		1	1 unit	133	0.325
		7KM2 111-1BA00-3AA0					
 <p>7KM PAC3200 measuring device</p> <p>Control panel flush-mounting instrument 96 mm x 96 mm Cable lug terminals for connecting current and voltage AC/DC power supply unit with wide voltage range: U_{AUX}: 95...240 V AC $\pm 10\%$, 50/60 Hz 110...340 V DC $\pm 10\%$</p> <p>Measuring inputs U_E: max. 3 AC 690/400 V, 50/60 Hz I_E: /1 A or /5 A</p> <p>7KM2 112-0BA00-2AA0</p>	A	Ring terminal lug connection 		1	1 unit	133	0.325
		7KM2 112-0BA00-2AA0					

More information







For accessories and information about current transformers and software components [see Page 7](#).

Measuring Devices and Power Management

7KM PAC Measuring Devices

7KM PAC4200 measuring devices

Selection and ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
  7KM4 212-0BA00-3AA0	A	7KM PAC4200 measuring device		1	1 unit	133	0.450
		Control panel flush-mounting instrument 96 mm x 96 mm Screw terminals for connecting current and voltage AC/DC power supply unit with wide voltage range U_{AUX} : 95 ... 240 V AC $\pm 10\%$, 50/60 Hz 110 ... 340 V DC $\pm 10\%$ Measuring inputs U_B : max. 3 AC 690/400 V, 50/60 Hz I_B : /1 A or /5 A					
  7KM4 211-1BA00-3AA0	A	7KM PAC4200 measuring device		1	1 unit	133	0.450
		Control panel flush-mounting instrument 96 mm x 96 mm Screw terminals for connecting current and voltage DC power supply unit with extra-low voltage U_{AUX} : 22 ... 65 V DC $\pm 10\%$ Measuring inputs U_B : max. 3 AC 500/289 V, 50/60 Hz I_B : /1 A or /5 A					
  7KM4 212-0BA00-2AA0	A	7KM PAC4200 measuring device		1	1 unit	133	0.450
		Control panel flush-mounting instrument 96 mm x 96 mm Cable lug terminals for connecting current and voltage AC/DC power supply unit with wide voltage range: U_{AUX} : 95...240 V AC $\pm 10\%$, 50/60 Hz 110...340 V DC $\pm 10\%$ Measuring inputs U_B : max. 3 AC 690/400 V, 50/60 Hz I_B : /1 A or /5 A					

More information

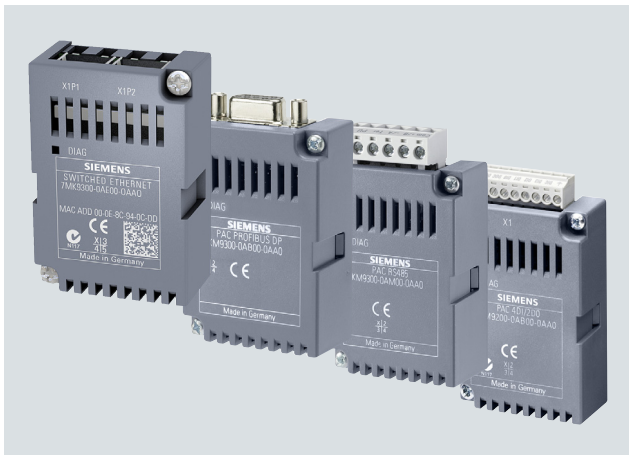
For accessories and information about current transformers and software components [see Page 7](#).

Measuring Devices and Power Management

7KM PAC Measuring Devices

Expansion modules for 7KM PAC measuring devices

Overview



From left to right:
 Expansion module 7KM PAC Switched Ethernet PROFINET
 Expansion module 7KM PAC PROFIBUS DP
 Expansion module 7KM PAC RS485
 Expansion module 7KM PAC 4DI/2DO

Expansion modules act as communication interfaces for 7KM measuring devices.

Communication modules are plugged in at the back of the measuring device. The device identifies the module automatically and presents the parameters of relevance for this module for selection in the parameterization menu.

7KM PAC Switched Ethernet PROFINET expansion module

The 7KM PAC Switched Ethernet PROFINET expansion module is a plug-in communication module for the 7KM PAC3200 and PAC4200 measuring devices.

- Standardized PROFINergy interface to the measured variables
- The measured variables can be individually selected using a GSDML file. This enables the use of cost-effective S7-CPU's
- Easy parameter assignment using the device display and STEP 7
- Integrated Ethernet Switching permits networking with short cables without additional switches
- Direct integration in production machine networks using IRT (IRT = Isochronous-Real-Time)
- Full support of PROFINET IO (DHC, DNS, SNMP, SNTCP)
- Device replacement without PG in the PROFINET network using LLDP
- Deterministic reversing time through ring redundancy (MRP)
- Modbus TCP for communication with 7KM powermanager or powerconfig
- 2 x Ethernet (RJ45) sockets
- Baud rates 10 and 100 Mbit/s
- Protocols PROFINET IO, PROFINergy and Modbus TCP
- No external auxiliary power necessary
- Additional display via the device display and via LEDs on the module

All measurement variables from 7KM PAC3200 and PAC4200 are individually selected and cyclically transmitted by means of the GSDML file. This enables optimum use of the process image of the PROFINET controller, e. g. CPU 315-2 PN/DP of SIMATIC S7.

The measured variables can be read out in acyclic mode using PROFINergy, a PNO protocol profile. Thanks to PROFINergy it is possible to assemble an energy management system with devices from various manufacturers using PROFINET.

7KM PAC PROFIBUS DP expansion module

The 7KM PAC PROFIBUS DP expansion module has the following features:

- Pluggable communication modules for 7KM PAC3200 and PAC4200 measuring devices
- Parameterizable from the front of the device or using parameterization software
- Using PROFIBUS DPV1, data can be transferred in both cyclic and acyclic modes
- Easy engineering thanks to integration into SIMATIC STEP 7 and/or simple integration via GSD file for other programming systems
- Optimum use of process image of a control for selection of individual measurement values for cyclical transfer
- All baud rates from 9.6 kbit/s up to 12 Mbit/s are supported
- Connection through 9-pole Sub-D connector according to IEC 61158
- No external auxiliary power necessary
- Additional display via the device display and via LEDs on the module

7KM PAC RS485 expansion module

The 7KM PAC RS485 expansion module has the following features:

- Pluggable 7KM PAC RS485 communication module for 7KM PAC3200 and PAC4200 measuring devices
- Parameterizable from the front of the device or using parameterization software
- Support for the Modbus RTU protocol
- Plug and play
- Baud rates 4.8 / 9.6 / 19.2 and 38.4 kbit/s are supported.
- Connection by means of 6-pole screw terminals
- No external auxiliary power necessary
- Status indication by LED on the module

The 7KM PAC RS 485 expansion module is required for the gateway function of the 7KM PAC4200 to achieve simple devices with RS 485 interface, such as the 7KM PAC3100, via Ethernet (Modbus TCP).

7KM PAC 4DI/2DO expansion module

The 7KM PAC 4DI/2DO expansion module is used to expand the 7KM PAC4200 measuring device to up to 10 digital inputs and 6 digital outputs.

It offers the following features:





- Up to two 7KM 4DI/2DO modules can be plugged onto a PAC4200
- The 7KM PAC 4DI/2DO modules mean that the internal digital inputs and outputs can be expanded by up to 8 inputs and 4 outputs
- The 4DI/2DO expansion modules can be parameterized via the front of the device or via the powerconfig configuration software
- The digital inputs can be used without external voltage sources. They are self-powered
- All functions of the integrated multifunctional inputs/outputs on the 7KM PAC4200 are also available in the 7KM PAC 4DI/2DO expansion module
- Inputs and outputs can be used as an S0 interface conforming to IEC 62053-31
- The connection is made via a 9-pole screw terminal
- No external auxiliary power supply is required

Measuring Devices and Power Management

7KM PAC Measuring Devices

Expansion modules for 7KM PAC measuring devices

Selection and ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*/P. unit	PG	Weight per PU approx. kg
 <p>7KM PAC Switched Ethernet PROFINET expansion module Expansion module for 7KM PAC3200 and PAC4200(PROFInergy)</p> <p>7KM9 300-0AE00-0AA0</p>	A	7KM9 300-0AE00-0AA0		1	1 unit	133	0.045
 <p>7KM PAC PROFIBUS DP expansion module Expansion module for 7KM PAC3200 and PAC4200 (PROFIBUS DPV1)</p> <p>7KM9 300-0AB00-0AA0</p>	A	7KM9 300-0AB00-0AA0		1	1 unit	133	0.045
 <p>7KM PAC RS485 expansion module Expansion module for 7KM PAC3200 and PAC4200 (Modbus RTU)</p> <p>7KM9 300-0AM00-0AA0</p>	A	7KM9 300-0AM00-0AA0		1	1 unit	133	0.041
 <p>7KM PAC 4DI/2DO expansion module Expansion module for 7KM PAC4200</p> <p>7KM9 200-0AB00-0AA0</p>	A	7KM9 200-0AB00-0AA0		1	1 unit	133	0.041

More information

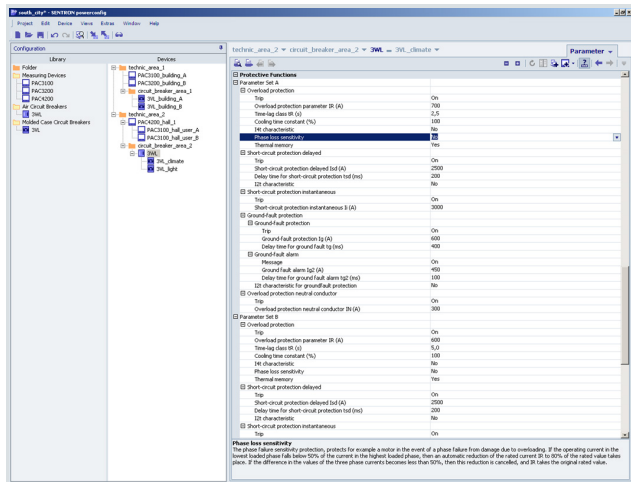
Software components

For more information about the software components see Catalog LV 10.1 · 2012, Chapter 13 and on the Internet at: www.siemens.com/lowvoltage/energymanagement

Software Configuring, Visualizing and Controlling with SENTRON

powerconfig

Overview

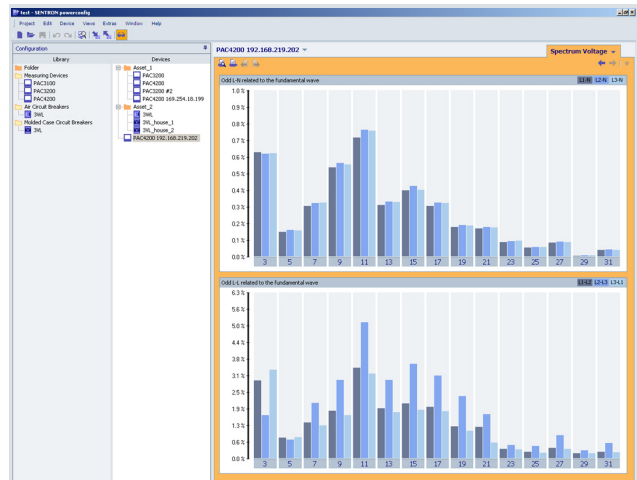


Setting the parameters of a SENTRON device

The powerconfig software is the new combined commissioning and service tool for communication-capable SENTRON measuring devices and circuit breakers.

The PC-based tool makes the parameterization of the devices easier, which gives rise to a considerable time saving, particularly when several devices have to be set up.

With powerconfig the 3WL and 3VL circuit breakers and the 7KM PAC measuring devices with expansion modules can be parameterized, documented, operated and monitored using various communication interfaces.



Display of current measured variables (harmonic)

Benefits

- Parameterization, documentation, operation and monitoring in one software
- Documentation of measured values and settings
- Clear presentation of the available parameters including plausibility testing of the inputs
- Display of the available device statuses and measured values in standardized views
- Project-oriented storage of device data
- Consistent operation and usability
- Support of the various device communication interfaces (Modbus RTU, Modbus TCP)
- Supported languages: English and German
- Read-out and saving of device recordings (device-dependent)
- Update of the device firmware and loading of language packs (device-dependent)
- No programming knowledge required for operation
- Communication via PROFIBUS and PROFINET and connection to STEP7 (available soon)

Field of application

System requirements

Hardware requirements

- Processor: Intel Pentium III, 1 GHz (or better)
- RAM: at least 512 MB
- Hard disk: at least 1 GB free
- Color monitor with a minimum resolution of 1024 x 768 pixels

Supported operating systems

- Microsoft Windows XP Prof. 32Bit SP3. MUL OS
- Microsoft Windows 7 Professional (32Bit)
- Microsoft Windows 7 Ultimate (32Bit)
- Microsoft Windows 7 Home Basic (32Bit)

Required framework:

- Microsoft .NET V3.5 SP1

More information

powerconfig is available free of charge at

<http://support.automation.siemens.com/WW/view/com/50241697>

You can find more information on the Internet at:

www.siemens.com/sentron