

SIEMENS

Catalog
Extract
LV 10

Edition
10/2023

SETRON • SIVACON • ALPHA

Low-Voltage Power Distribution and Electrical Installation Technology

Measuring Devices, Power Monitoring and
Digitalization Solutions

[siemens.com/lowvoltage](https://www.siemens.com/lowvoltage)

Innovative solutions for industrial controls and power distribution

Reliable components and systems are essential in ensuring smooth power distribution in buildings and industrial plants.

With SIRIUS, SENTRON, SIVACON and ALPHA, we offer an innovative portfolio for standard-compliant and demand-oriented applications.

Efficient engineering tools and innovative cloud-based solutions can be flexibly tailored to individual requirements.

We are there when you need us

Your personal contact can be found at
www.siemens.com/lowvoltage/contact

Catalog LV 10 · 10/2023

You will find the latest edition and all future editions in SiePortal at www.siemens.com/lowvoltage/catalogs

You can find the current prices in SiePortal at www.siemens.com/lowvoltage/product-catalog



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with EN ISO 9001 (for the Certified Registration Nos., see www.siemens.com/system-certificates/ep). The certificate is recognized by all IQNet countries.

Technical specifications

The technical specifications are for general information purposes only. Always heed the operating instructions and notices on individual products during assembly, operation and maintenance.

All illustrations are not binding.

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Low-Voltage Power Distribution and Electrical Installation Technology

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A



Easy, reliable, cost-efficient

There are many advantages to be had from keeping a watchful eye on your energy consumption: in addition to cost savings through optimized consumption, you ensure increased resilience with the monitoring of power supply systems and network quality in infrastructure and industrial plants.

At the same time, systematic power monitoring increases your awareness of actual energy consumption, making it a key prerequisite for greater energy efficiency.

Integration into open IoT operating systems such as Insights Hub results in even greater optimization potential.

What is more, with a power monitoring system you lay the foundation for regular energy audits and a corporate energy management system according to ISO 50001 and ISO 50003.

Measuring Devices, Power Monitoring and Digitalization Solutions

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A multitude of additional information ...

Information + ordering

All the important things at a glance

For information about measuring devices, power monitoring and digitalization solutions, please visit our websites

www.siemens.com/sentron-measuring-devices
www.siemens.com/sentron-digital

Your product in detail

The SiePortal platform (knowledge base) provides comprehensive information

www.siemens.com/lowvoltage/product-support

- Quick Selection Guide
 - SENTRON portfolio for power monitoring (109744725)
- Brochure
 - SENTRON Powermanager – update and benefit (109805178)

The relevant tender specifications can be found at www.siemens.com/tenderspecifications

Siemens YouTube channel

- Power monitoring (general) sie.ag/7N6g4g

Everything you need for your order

Refer to SiePortal to find an overview of your products (product catalog)

- Measuring devices and power monitoring sie.ag/2kTH9Lz
- Digitalization solutions sie.ag/2olliNi
- Configuring and visualizing for SIMATIC sie.ag/2kpbwcs
- Software and apps sie.ag/2kTJjuF

Direct forwarding to the individual products in SiePortal by clicking on the article number in the catalog or entering this web address incl. article number www.siemens.com/product_catalog_SIEP?Article.No.

Configurators

The configurator reduces the time and effort required in the planning and ordering process, and allows for individual adaptations.

Configure your 7KM PAC and 7KT PAC measuring device at www.siemens.com/lowvoltage/pac-configurator

The fast track to the experts

Contact persons in your region

We offer a comprehensive portfolio of services.

You can find your local contacts at

www.siemens.com/lowvoltage/components/contact

You will find further information on services at

www.siemens.com/service-offers

Competent expert advice on technical questions with a wide range of demand-optimized services for all our products and systems.

Assistance with technical queries is provided at

www.siemens.com/support-request

... can be found in our online services

Commissioning + operation

Your product in detail

The SiePortal platform (knowledge base) provides detailed technical information

www.siemens.com/lowvoltage/product-support

- Operating instructions
- Certificates

Online Support app available for download from the [App Store](#) and [Play Store](#)

You will find further information at

www.siemens.com/support-app

Provision of 3D data (step and u3d data formats)

- SiePortal (product catalog)
www.siemens.com/lowvoltage/product-catalog
- Image database
www.siemens.com/lowvoltage/picturedb

Engineering data for CAD or CAE systems are available in the CAx Download Manager at

www.siemens.com/cax

Face-to-face or online training

Our training courses can be found at
www.siemens.com/sitrain-lowvoltage

- Digitalization in power distribution boards (WT-LVDIGI)
- SENTRON circuit protection devices with measuring and communication function (WT-LVBCOM)
- Power Monitoring with SENTRON (WT-LVAEM)
- Energy Management with SENTRON Powermanager – User training (LV-PM)
- SENTRON Powermanager graphic module – User training (LV-PMG)

SENTRON Powerconfig

The combined commissioning and service tool SENTRON Powerconfig for communication-capable measuring devices, circuit protection devices and circuit breakers.

Free download SENTRON Powerconfig
www.siemens.com/powerconfig

Free download SENTRON Powerconfig mobile via [App Store](#) and [Play Store](#)

Manuals

Manuals can be found in SiePortal at
www.siemens.com/lowvoltage/manuals

- Configuration Manual
 - Measuring devices and power monitoring (45315973)
- Equipment Manual
 - 7KT PAC1600 energy meter (109759827)
 - 7KT PAC1600 multimeter (109760293)
 - 7KM PAC2200 power monitoring device (109746835)
 - 7KM PAC2200CLP power monitoring device (109783220)
 - 7KM PAC3200T power monitoring device (109746833)
 - SENTRON PAC5100/5200 7KM5212/5412 (109477872)
 - 7KM PAC3120 and 7KM PAC3220 (109767307)
 - SENTRON Powercenter 3000 (109763838)
- System Manual
 - 7KT multichannel current measuring system (109483442)
 - SENTRON power monitoring device PAC4200 (34261595) // PAC4220 (109823026)
 - SENTRON circuit protection devices with communication and measuring function (109791806)
- Communication Manual
 - SENTRON PAC5100/5200 7KM5212/5412 (109477870)
 - 3VA molded case circuit breakers with IEC and UL certification (98746267)
- SEM3™
 - Embedded Micro Metering Module™ (109748928)
- Quick Installation Guide
 - SENTRON POWERCENTER 3000 (109766001)
- Installation Manual
 - Circuit protection devices with communication and measuring function (109791805)

Technical overview – Measuring devices, power monitoring and digitalization solutions



The fast way to get you to our online services

This page provides you with comprehensive information and links on measuring devices, power monitoring and digitalization solutions

www.siemens.com/lowvoltage/product-support (109764480)

Power monitoring

Software

Local monitoring systems

Web



Web interface integrated

Mobile App



SENTRON Powerconfig

Functions for power monitoring

Commissioning of measuring devices and circuit breakers	–	■
Displaying current data	■	■
Displaying/evaluating current/historical values	■	■
Prepared analyses/reports	–	–
Customized reporting	–	–
Data analysis in the cloud	–	–

Additionally for energy management

Switching loads on and off

–

–

Operating environment

Use

Free of charge

Free of charge

System requirements

Browser

Android, iOS

Suitable according to ISO 50001

–

–

Connection of non-Siemens devices

–

–

Integrated cloud interface

–

–

Further information

From page 10/12

Measuring devices, circuit breakers and circuit protection devices

Measuring devices for industrial applications



7KM PAC1020

–

–

7KM PAC2200/PAC2200CLP

■

■^{1) 2)}

7KM PAC3200T

■

■¹⁾

7KM PAC3120

–

■²⁾

7KM PAC3220

■

■

7KM PAC4200

■

■

7KM PAC4220

–

–

7KM PAC5200

■

–

Measuring devices for buildings and infrastructure



7KT PAC1200

■

–

7KT PAC1600

–

–

SEM3/SEM3T

■

–

Circuit breakers



3WA

–

■

3WL

–

■

3WL10/3VA27

–

–

3VA ETU5/8

–

■

Communication-capable circuit protection devices



SENTRON Powercenter 1000/

–

■

5ST3 COM AS+FC/

5SL6 COM MCB/

5SV6 COM AFDD/

3NA COM Fuse

Other Modbus devices

–

–

■ Function available

– Function not available

¹⁾ Via WiFi

²⁾ Via gateway (PAC4200)

³⁾ Incl. module for Desigo CC building management

⁴⁾ Via XML/JSON

⁵⁾ Via SPP2000

⁶⁾ Via Modbus TCP

PC-based			Cloud	World of SIMATIC	
SENTRON Powerconfig	SENTRON Powermanager ³⁾	SENTRON Powercenter 3000	SENTRON Powermind (Insights Hub)	TIA Portal	
				SIMATIC TIA Portal integrated	SIMATIC TIA Portal capable
■	-	-	-	■	-
■	■	■	■	■	■
■	■	■	■	■	■
-	■	-	■	■	-
-	■	-	-	-	-
-	-	-	■	-	-
-	■	-	-	■	■
Free of charge	License and trial license	-	Subscription	-	-
Windows X64	Windows X64	-	Browser	-	-
-	■ (TÜV)	■	■	-	-
-	■	■	■	-	-
-	■	■	■	-	-
From page 10/12	From page 10/14	From page 10/18	From page 10/22		
■	■ ⁴⁾	■	■	-	-
■	■	■	■	-	■ ⁵⁾
■	■	■	■	-	■ ⁵⁾
■	■	■	■	-	-
■	■	■	■	■	■
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■	■	-	-	-	-
■	■	-	-	-	-
■	■/■ ⁴⁾	-	-	-	-
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■	■	■	■	■	■
■	■	■	■	-	■ ⁶⁾
■	■	■	■	-	-

Hardware components

Industry



	7KM PAC1020	7KM PAC2200	7KM PAC2200- CLP	7KM PAC3200T	7KM PAC3120	7KM PAC3220
Type of mounting						
Front mounting DIN rail Screw mounting	■ - -	- ■ -	- ■ -	- ■ -	■ - -	■ - -
Withdrawable Fixed-mounted	- -	- -	- -	- -	- -	- -
Measuring connection						
Direct measurement	-	■	■	-	-	-
Transformer measurement	■	■	■	■	■	■
Multichannel measuring system	-	-	-	-	-	-
Suitable transformers						
Window-type current transformers	■	■	■	■	■	■
Folding transformer	■	■	■	■	■	■
Integrated transformer	-	-	-	-	-	-
Commissioning						
MID/PTB-A50.7 version	- -	■ -	■ ■	- -	- -	- -
Max. input voltage L-L/L-N	400 V/230 V	400 V/230 V	400 V/230 V	400 V/230 V	690 V/400 V	690 V/400 V
Transformer connection version	x/1 A or x/5 A	x/1 A or x/5 A	x/1 A or x/5 A	x/1 A or x/5 A	x/1 A or x/5 A	x/1 A or x/5 A
Direct connection version	-	65 A	65 A	-	-	-
DC power supply unit with extra-low voltage version	-	-	-	-	24 ... 60 V DC ±20%	24 ... 60 V DC ±20%
1-phase counter version	-	■	■	-	-	-
Electrically isolated voltage inputs	-	-	-	-	-	-
Version without display (for web interface)	-	-	-	■	-	-
Evaluation						
Measured quantities						
Average value of measured values	-	■	■	■	■	■
Voltage, current, frequency	■	■	■	■	■	■
Power, power factor	■	■	■	■	■	■
Energy measurement						
Daily energy storage	-	> 221 days	> 10 years	> 221 days	> 221 days	> 221 days
Monthly energy storage	-	> 25 months	> 10 years	> 25 months	> 25 months	> 25 months
Yearly energy storage	-	> 7 years	> 10 years	> 7 years	> 7 years	> 7 years
Apparent Active Reactive energy p.f. power factor	- ■ ■ - ■	■ ■ ■ - ■	■ ■ ■ - ■	■ ■ ■ - ■	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Distortion factor THD (voltage, current)	-	-	-	■	■	■
Harmonics (voltage, current)	-	-	-	-	-	-
Phase angle/phase chart	-	-	-	-	-	-
Load profile recording	-	-	■	-	-	-
Flicker acc. to IEC 61000-4-15	-	-	-	-	-	-
Monitoring functions						
Operating hours counter	-	-	-	■	■	■
Limit monitoring	-	-	-	■	■	■
Logic functions	-	-	-	■	■	■
Event log	-	-	-	-	-	-
Gateway function	-	-	-	-	-	-
Reporting acc. to EN 50160	-	-	-	-	-	-
Integrated fault recorder	-	-	-	-	-	-
Integrated communications interfaces						
Digital inputs/digital outputs	1/1	1/1	1/1	1/1	2/2	2/2
S0 interface	■	■	■	■	■	■
M-Bus	-	■	-	-	-	-
RS485 (Modbus RTU)	■	■	-	-	■	-
Ethernet with Modbus TCP	-	■	■	■	-	■
BACnet	-	-	-	-	-	-
Further information						
	See page 10/26	See page 10/26	See page 10/26	See page 10/26	See page 10/26	See page 10/26

¹⁾ Available with prompt firmware update (see SiePortal)

Industry

Buildings and infrastructure

Circuit breakers



7KM PAC4200 7KM PAC4220 7KM PAC5200 7KT PAC1200 7KT PAC1600 SEM3 3WA 3WL 3WL10/3VA27 3VA ETU8

■ - -	■ - -	■ ■ -	- - -	- - -	- - ■	- - -	- - -	- - -	- - -
- -	- -	- -	- -	- -	- -	■ ■	■ ■	■ ■	- ■
-	-	-	■	■	-	-	-	-	-
■	■	■	■	■	-	■	■	■	■
-	-	-	■	-	■	-	-	-	-
■	■	■	■	■	■	-	-	-	-
■	■	■	■	■	■	-	-	-	-
-	-	-	■	-	■	■	■	■	■
- -	- -	- -	- -	■ -	- -	- -	- -	- -	- -
690 V/400 V x/1 A or x/5 A	690 V/400 V x/1 A oder x/5 A	690 V/400 V x/1 A or x/5 A	400 V/230 V x/5 A	400 V/230 V x/5 A	480 V/277 V 50 ... 1200 A/0.1 A	1000 V/577 V integrated	690 V/400 V integrated	690 V/400 V integrated	690 V/400 V integrated
-	-	-	40/63 A	63/80 A	-	-	-	-	-
22 ... 65 V DC	DC 24 ... 48 V ±25%	-	-	-	-	24 V DC	24 V DC	24 V DC	24 V DC
-	-	-	■	■	■	-	-	-	-
-	-	■	-	-	-	-	-	-	-
-	-	■	■	-	■	-	-	-	-
■	- ¹⁾	-	-	-	-	■	■	-	-
■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■
> 365 days	- ¹⁾	-	-	-	-	-	-	-	-
> 24 months	- ¹⁾	-	-	-	-	-	-	-	-
-	- ¹⁾	-	-	-	-	-	-	-	-
■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	- ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
■	■	■	-	-	■	■	■	■	■
■	■	■	-	-	-	-	-	-	■
2nd to 64th	2. bis 64.	2nd to 40th	-	-	-	2nd to 31st	2nd to 29th	-	-
■	■	■	-	-	-	-	-	-	-
■	- ¹⁾	-	-	-	■	■	■	■	■
-	-	■	-	-	-	-	-	-	-
■	■	-	-	■	-	■	■	-	■
■	- ¹⁾	■	-	■	-	-	■	■	■
■	- ¹⁾	■	-	-	■	-	-	-	-
> 4000 events	- ¹⁾	■	-	-	-	-	■	■	■
■	- ¹⁾	-	-	-	-	-	-	-	-
-	-	■	-	-	-	-	-	-	-
-	-	■	-	-	-	-	-	-	-
2/2	2/2	0/2	-	1/1	2/1	■	■	■	■
■	■	-	-	■	-	■	-	■	■
-	-	-	-	■	-	-	-	-	-
-	-	-	-	■	-	-	■	■	■
■	■	■	■	-	■	■	■	■	■
-	-	-	-	-	■	-	-	-	-

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Hardware components

Circuit protection devices



SENTRON Powercenter
1000

5ST3 COM auxiliary
switches and fault
signal contacts

5SV6 COM AFDD/MCB

Communications interfaces

Radio link	■	■	■
Modbus TCP	■	–	–
Bluetooth	■	–	–
Gateway function	■	–	–

Type of mounting

DIN rail	■	■	■
Busbar	–	–	–

Evaluation

Switching state	–	■	■
Temperature	–	■	■
Current	–	–	■
Residual current (in various frequency ranges)	–	–	–
Voltage	–	–	■
Frequency	–	–	■
Apparent, reactive and active power, power factor	–	–	■
Reactive and active energy	–	–	■

Monitoring functions

Operating hours counter	■	■	■
Operating hours counter with load current	–	–	■
Operating cycles counter	–	■	■
Trip counter	–	■	■
Short-circuit trip counter	–	–	■
Alarms for limit monitoring	■	■	■
Detection of overload and short circuit	–	–	■
Detection of arcing faults	–	–	■

Further information

See page 10/20

See page 3/54 and 4/64

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¹⁾ Protection function provided, but tripping is not communicated

Circuit protection devices



**5SL6 COM miniature
circuit breakers**

3NA COM fuses

EM

RCM/EMw

EM	RCM/EMw	3NA COM fuses
■	■	■
-	-	-
-	-	-
■	■	-
-	-	■
■	■	-
■	■	■
■	■	■
-	■	-
■	■	-
■	■	-
■	■	-
■	■	-
■	■	-
■	■	■
■	■	■
■	■	-
■	■	-
■	■	-
■	■	■
■	■	- ¹⁾
-	-	-

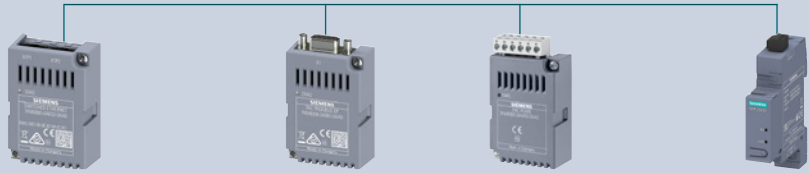
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Accessories

Communication modules



**7KM Switched Ethernet
PROFINET/Modbus TCP**

**7KM
PROFIBUS DP**

**7KM RS485
Modbus RTU**

**SETRON PROFINET
Proxy SPP2000**

Industry

	7KM PAC1020	-	-	-	-
	7KM PAC2200	-	-	-	■
	7KM PAC2200CLP	-	-	-	■
	7KM PAC3200T	-	-	-	■
	7KM PAC3120	-	-	-	-
	7KM PAC3220	■	■	■	-
	7KM PAC42x0	- ¹⁾	- ¹⁾	■	-
	7KM PAC5200	-	-	-	-

Buildings and infrastructure

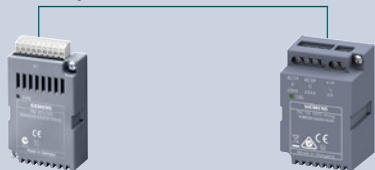
	7KT PAC1200	-	-	-	-
	7KT PAC1600	-	-	-	-
	SEM3	-	-	-	-

Circuit breakers

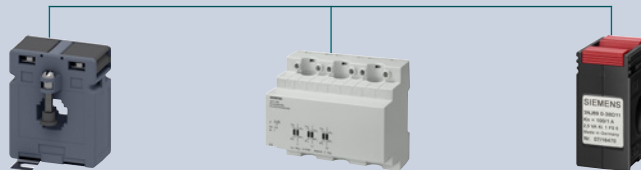
	3WA/3WL	-	-	-	-
	3WL10/3VA27	-	-	-	-
	3VA ETU5/8	■	■	■	-

¹⁾ Available with prompt firmware update (see SiePortal)

Expansion modules



Current transformers



7KM PAC
4DI/2DO

7KM PAC
I(N), I(Diff), analog

4NC

7KT

3NJ calibrated

7KM PAC 4DI/2DO	7KM PAC I(N), I(Diff), analog	4NC	7KT	3NJ calibrated
-	-	■	■	■
-	-	■	■	■
-	-	-	-	■
-	-	■	■	■
-	-	■	■	■
■	■	■	■	■
- 1)	- 1)	■	■	■
-	-	■	■	■
-	-	-	-	-
-	-	■	■	■
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

SENTRON Powerconfig

Configuration software for commissioning and maintenance

SENTRON Powerconfig is available free of charge at www.siemens.com/powerconfig

You will find further information on the internet at www.siemens.com/sentron

Free download SENTRON Powerconfig mobile via:

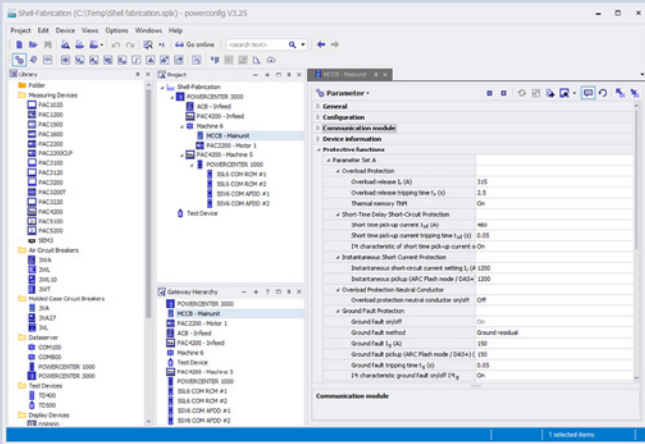


App Store

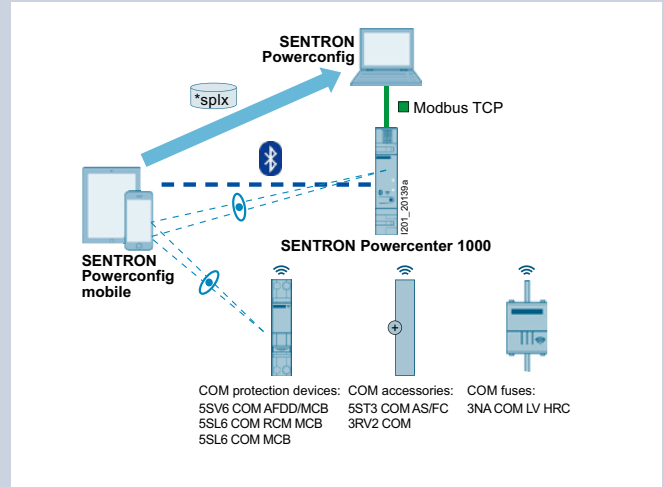


Play Store

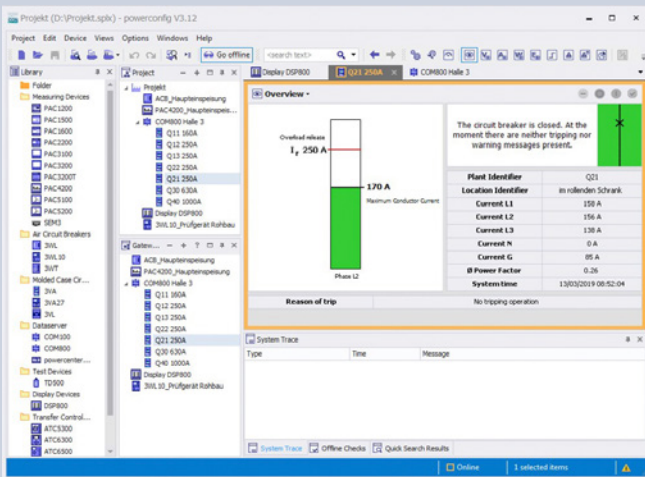
- Software tool for the efficient commissioning and diagnostics of communication-capable SENTRON components
- Supports all electronic SENTRON devices, e.g. 3WA, 3WL, 3VA, SENTRON Powercenter 3000 and SENTRON Powercenter 1000, with 5ST3 AS+FC COM, 5SL6 MCB COM, 5SV6 AFDD COM and 3NA Fuse COM
- General range of functions:
 - User-friendly parameter assignment even for complex devices such as the 3WA
 - Fast, optical detection of communication and measuring-capable circuit protection devices, such as SENTRON Powercenter 1000
 - Saving and printing of device settings
 - Testing the 3WA and archiving the test results
 - Monitoring, saving and printing of instantaneous measured quantities
 - Execution of specific device functions, such as resetting of devices and setting of energy meters
- Service functions:
 - Detection of devices and acquisition of measured quantities and status information via different networks, e.g. via Ethernet
 - Device and status acquisition via local interfaces, such as Bluetooth and USB
 - Acquisition and archiving of historic records, such as load profiles and events
 - Firmware updates
 - Switching of language packs for 7KM PAC measuring devices
- Cooperative interaction between SENTRON Powerconfig mobile and SENTRON Powerconfig on the PC:
 - SENTRON Powerconfig mobile offers a high degree of mobile versatility, e.g. to scan codes on the circuit protection devices
 - SENTRON Powerconfig on the PC can be used for subsequent editing and archiving of the system configuration



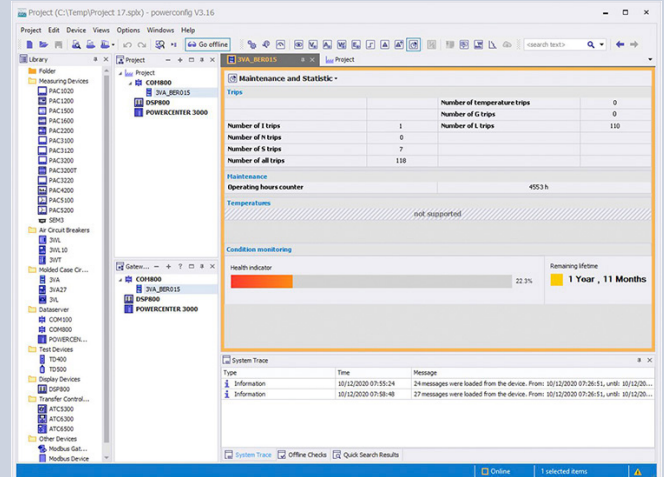
Setting of parameter values



Scanning of circuit protection devices



Display of the circuit breaker status



Display of the state of health of the 3VA

SENTRON Powermanager

PC-based power monitoring software



SENTRON Powermanager

SENTRON Powermanager is based on the modern Desigo CC platform with advanced graphical capabilities and a standard SQL database. The workflows for setting up the system, creating devices, graphically displaying the device data and processing it in reports have been fundamentally revised.

You can find the latest download and change information at www.siemens.com/lowvoltage/product-support (109771760)

Updates and upgrades of version 4.x or higher are based on the SUS/SUR principles.

You will find further information in the brochure – SENTRON Powermanager – update and benefit

www.siemens.com/lowvoltage/product-support (109805178)

If you wish to migrate from classic Powermanager (3.6) to the current version, please get in touch with your local Siemens contact.

The "Trial" license gives customers the opportunity to gain initial experience with SENTRON Powermanager during a 60-day test phase. The application can still be used by purchasing a regular license.

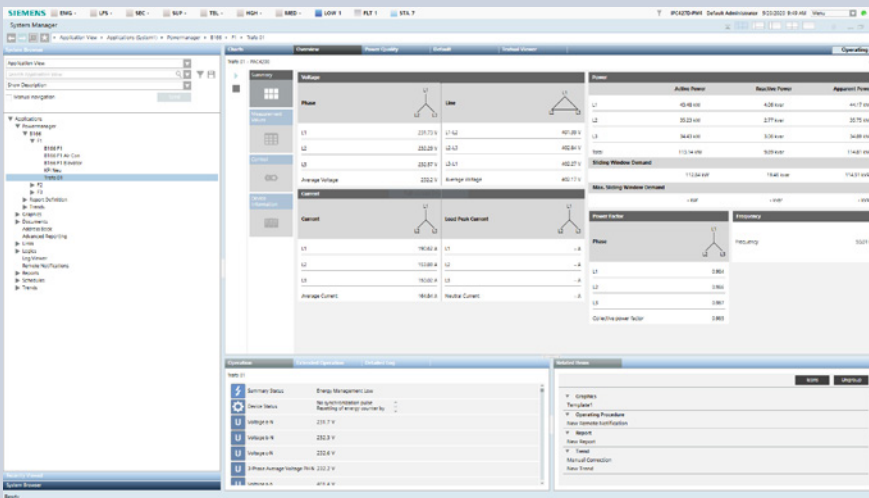
You will find further information on the internet at www.siemens.com/powermanager

You will find training courses on the internet at www.siemens.com/sitrain-lowvoltage

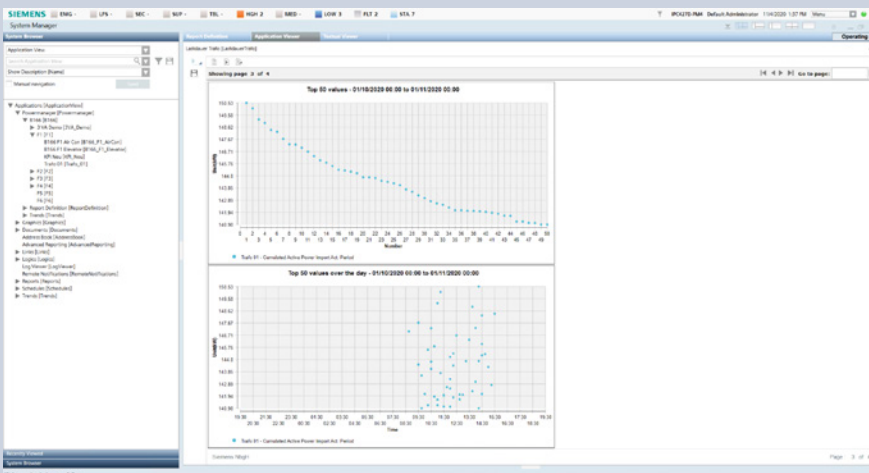
Version	Description	Article No.
SENTRON Powermanager		
Extended Package	Full product license for up to 10 devices, installation for client/server, web access via Windows App Client	7KN2710-2CE40-0YCO
Trial license	Full product license limited to 60 days for up to 10 devices, incl. all functions; software download via SIOS Portal www.siemens.com/lowvoltage/product-support (109771760) A free license for one-time use (trial license limited to 60 days) must also be requested via www.siemens.com/sentron-powermanager-trialversion	
Device expansions		
Device Pack (20)	Device expansion license for up to 20 devices	7KN2711-1CE40-0YCO
Device Pack (50)	Device expansion license for up to 50 devices	7KN2711-2CE40-0YCO
Device Pack (100)	Device expansion license for up to 100 devices	7KN2711-3CE40-0YCO
Device Pack (200)	Device expansion license for up to 200 devices	7KN2711-4CE40-0YCO
Device Pack (500)	Device expansion license for up to 500 devices	7KN2711-5CE40-0YCO
Device Pack (1000)	Device expansion license for up to 1000 devices	7KN2711-6CE40-0YCO
Option packs		
"Graphics Editor 60 Days" option pack	Option for creating any number of freely configured graphics, validity period limited to 60 days	7KN2712-0CE40-0YCO
"Graphics Editor Unlimited" option pack	Option for creating custom-made SENTRON Powermanager applications, e.g. graphics; especially suitable for partners such as Solution Providers, control cabinet builders, etc.	7KN2712-0CE40-0YC1
"Client (2)" option pack	Expansion for up to 2 clients	7KN2712-1CE40-0YCO
"Client (5)" option pack	Expansion for up to 5 clients	7KN2712-2CE40-0YCO
"SENTRON Powermanager OPC UA/DA Client (100)" option pack	100 data points for OPC client configuration	7KN2712-3CE40-0YCO
"SENTRON Powermanager OPC UA Server" option pack	OPC server configuration	7KN2712-3CE40-0YC2
"SENTRON Powermanager Server" option pack	Additionally, SENTRON Powermanager server license for distributed systems without devices, web, etc.	7KN2712-4CE40-0YCO
"SENTRON logics" option pack	Extended logic function	7KN2712-6CE40-0YCO
SENTRON Powermanager SUR-Unit	Update – Extend subscription period by 12 months	7KN2713-7CE40-0YCO
SENTRON Powermanager SUS-Unit	Update – Start new 12-month subscription period	7KN2713-8CE40-0YCO
System packages		
System 1	Package comprising 1× SENTRON Powermanager Extended 1× PAC4200 1× PAC3120 1× RS485 modules	7KN2715-1CE40-0YCO
System 3	Package comprising 1× SENTRON Powermanager Extended 3× PAC3220	7KN2715-3CE40-0YCO
System 4	Package comprising 1× SENTRON Powermanager Extended 1× PAC4200 4× PAC1600 1× RS485 module	7KN2715-4CE40-0YCO
System 5	Package comprising 1× SENTRON Powermanager Extended 5× PAC2200 transformer measurement Modbus TCP	7KN2715-5CE40-0YCO



SENTRON Powermanager – Measuring device diagram



SENTRON Powermanager – Overview of measuring devices

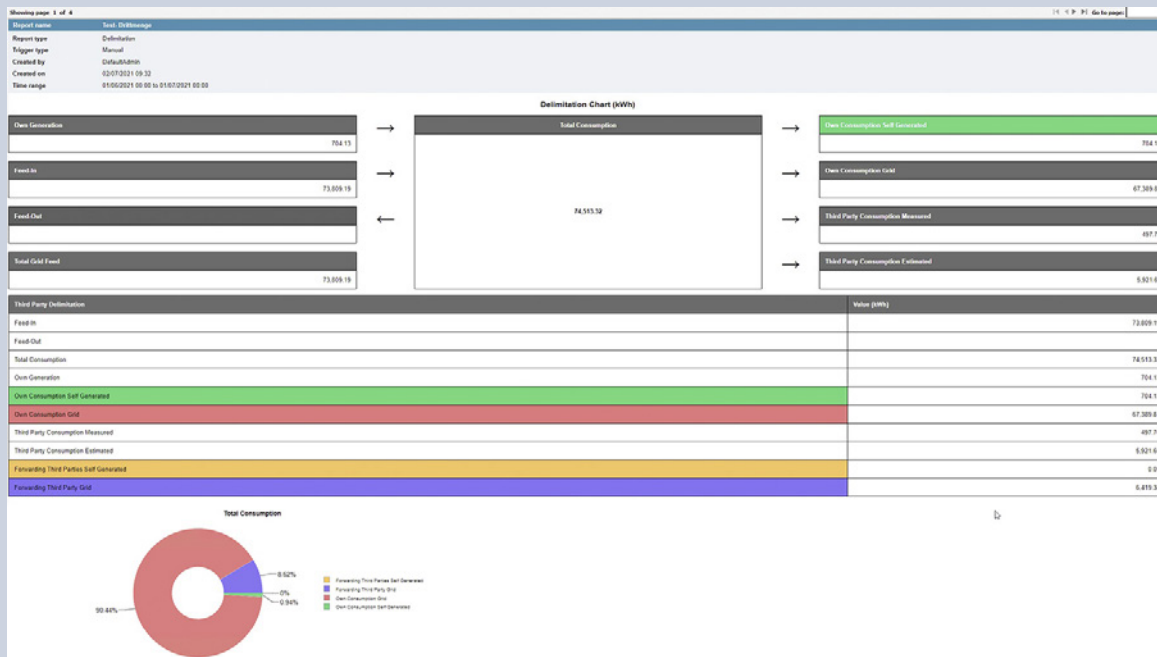


SENTRON Powermanager – Load duration report

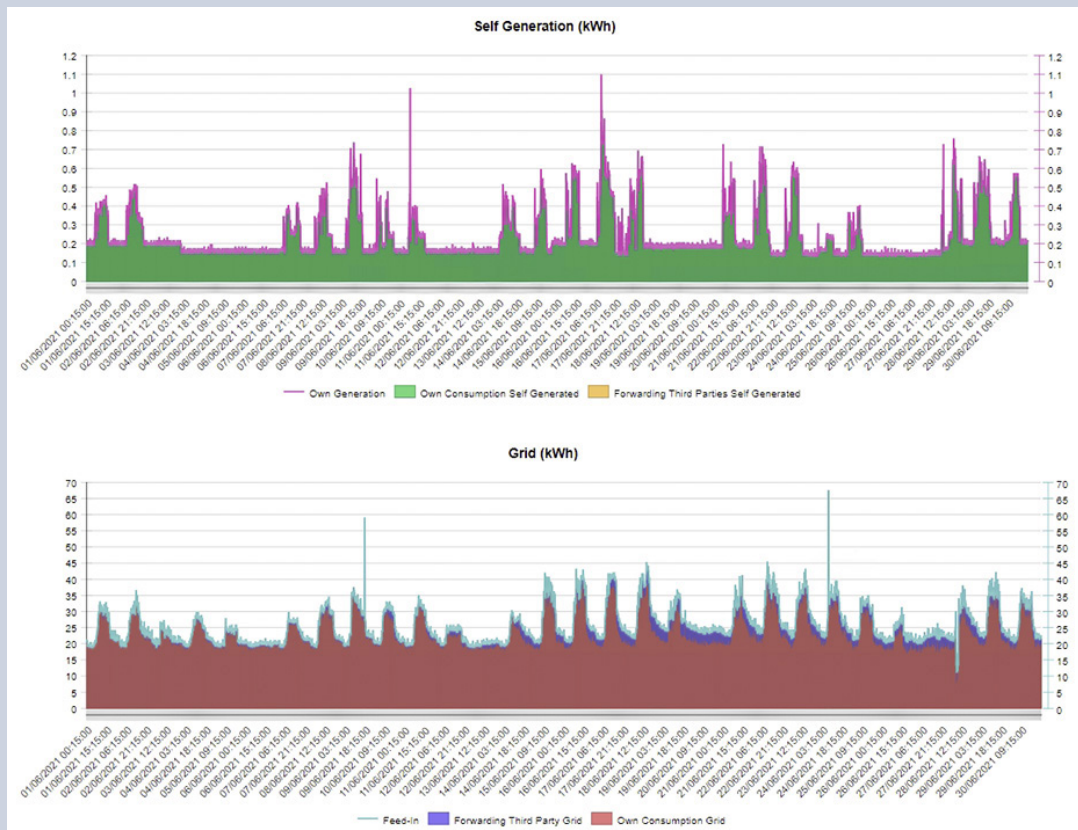
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SENTRON Powermanager

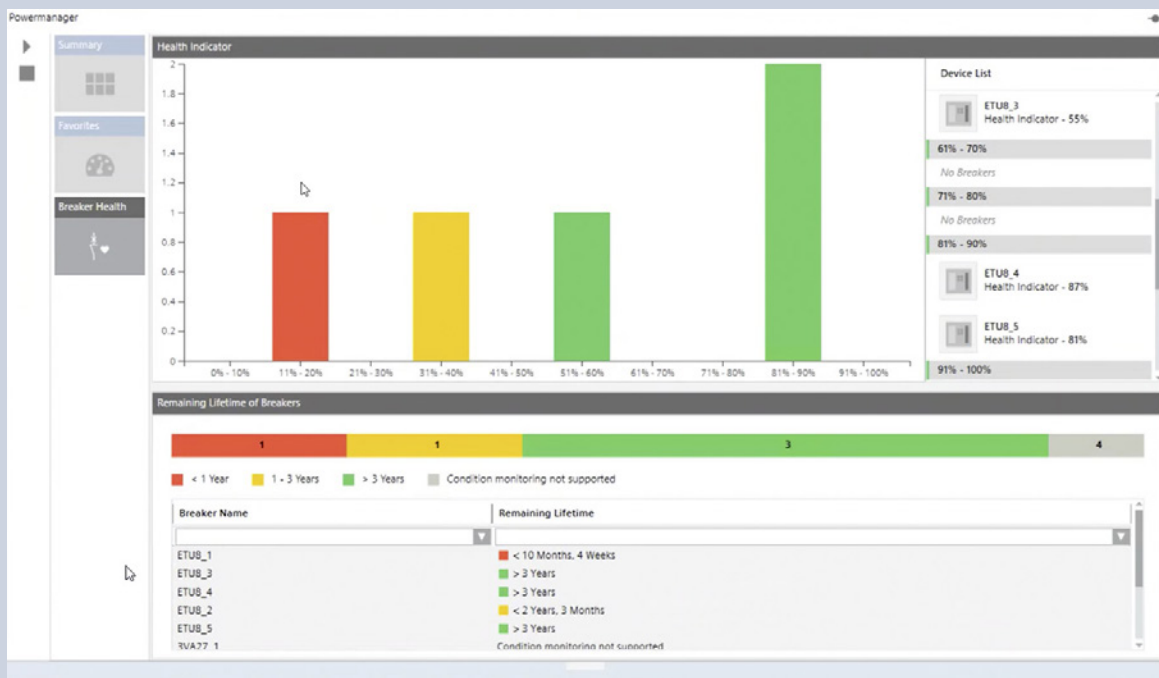
PC-based power monitoring software



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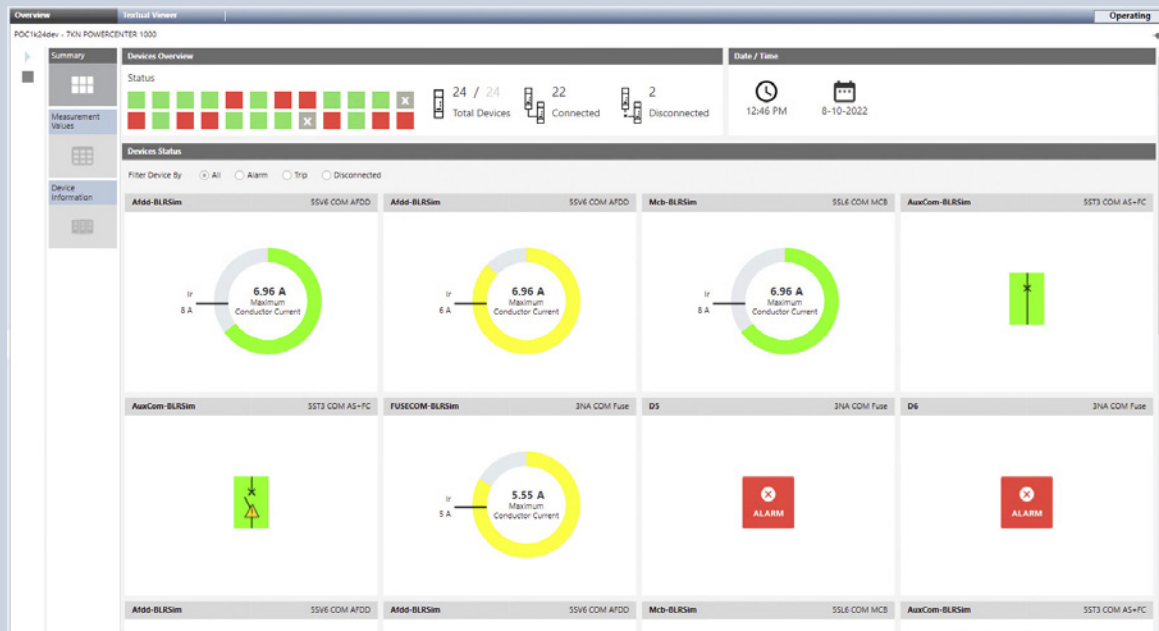


Third-party quantity report



Health Dashboard

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SENTRON Powercenter 1000 Dashboard

SENTRON Powercenter

Edge/IoT-based data acquisition and visualization for low-voltage power distribution

SENTRON Powercenter 3000

Areas of use and applications

- Basis for certified energy management according to ISO 50001 to improve energy efficiency and optimize maintenance management
- Transparency and fault localization in single and distributed locations
- Future-proof foundation for expanding data analysis from on-site analysis to cloud-based analysis

Features

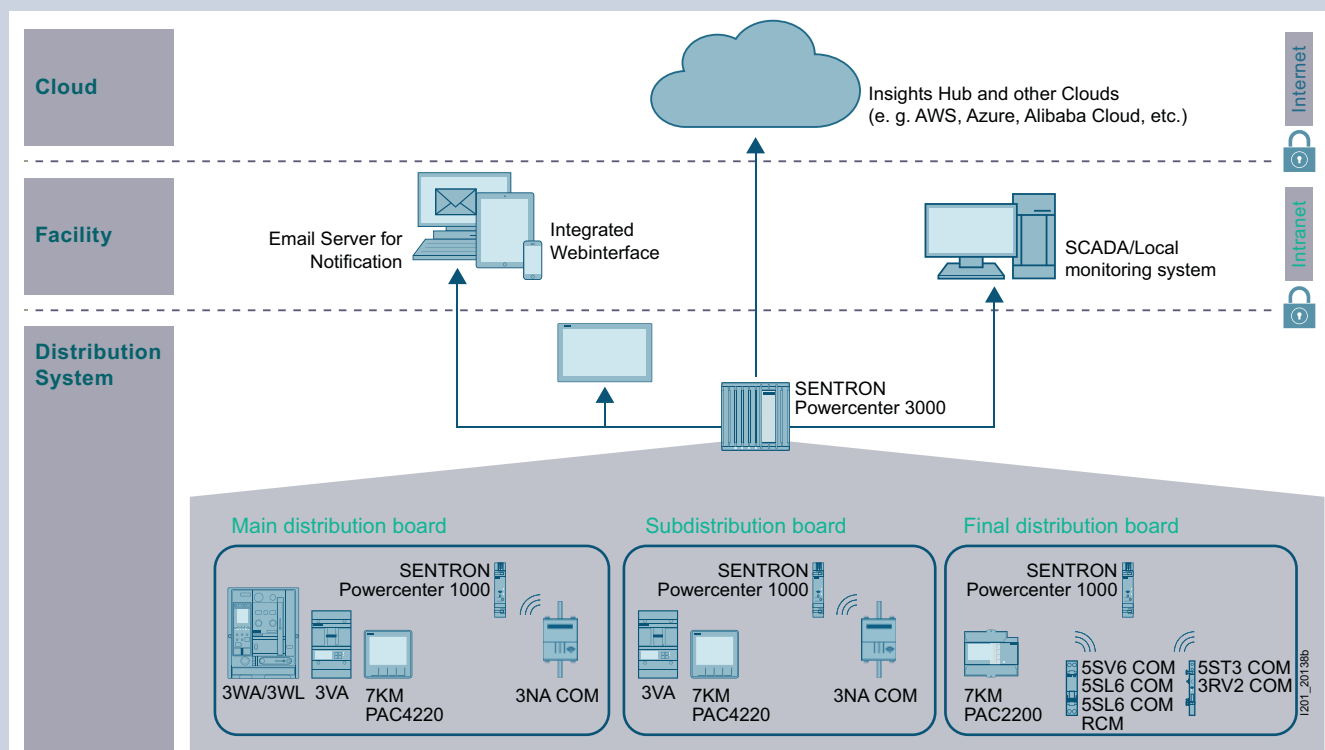
- Simple and fast commissioning via
 - Reuse of the configuration data from SENTRON Powerconfig or
 - An integrated network scan with automatic device recognition and dashboard selection in accordance with the device type
- Data acquisition, storage and provision
 - All key data of lower-level devices and energy/demand values, breaker status, signals etc.
 - The 15min energy values as a basis for energy reporting as part of ISO 50001 certification
 - Export in form of CSV file (once, periodically, send e.g. by email)
- Visualization/data analysis
 - Analysis of the data in graphical form, e.g. lines, bars, diagrams, and also in tabular form

- In the web interface of the SENTRON Powercenter 3000 via the predefined device dashboards and the customer-specific dashboards
- Can also be output as a report
- Interfaces for the digitalization of low-voltage
 - Integrated and easy-to-configure communication with SENTRON Powermind (see separate section)
 - To other cloud applications, e.g. based on AWS, Azure, AliCloud, etc.
 - Via Modbus TCP for other applications, e.g. SENTRON Powermanager
- General:
 - Energy and status data from infeed to the final circuit of up to 32 SENTRON protection, switching, measuring and monitoring devices (expandable to up to 212 devices with license-based extensions – subject to fee)
 - Non-Siemens devices are created via SENTRON Power Device Engineer and treated like any other device
 - Compact design, Web interface in 10 languages
 - Flexible IT security features for protection against unauthorized access

More information:

www.siemens.com/sentron-powercenter3000

Mounting	Interfaces	Protocols	Article No.
DIN-rail mounting	2x Ethernet	Modbus TCP, http, Insights Hub	7KN1310-0MC00-0AA8



Areas of use and applications for SENTRON Powercenter 3000

The following examples give an impression of the diverse functions of the SENTRON Powercenter 3000. These are aimed at different customer groups, such as energy managers and maintenance personnel, but also electricians. All information is available via a web browser on a standard PC, but also on mobile devices, such as tablets and smartphones. The information is therefore also available remotely within the company network.

Predefined dashboards

These are automatically selected according to the configuration of the SENTRON Powercenter 3000 and show the most important data of SENTRON protection, switching and measuring devices.



Data visualization based on the example of a measuring device

- Key data points such as active energy or active power are displayed in the form of a curve (time range can be altered by scrolling).
- Further instantaneous values or device information are available in tabular form.



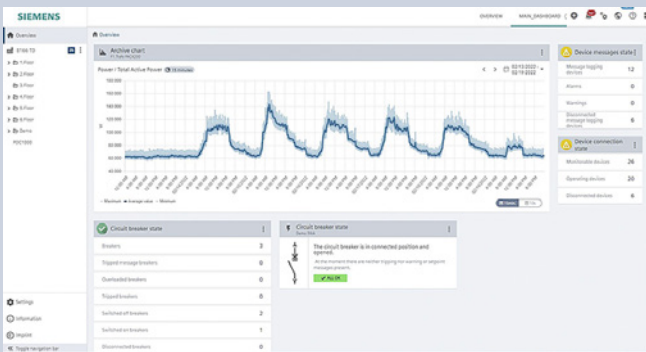
Information on the status of protection and switching devices

- Representation of the device status, e.g. open, closed, tripped and relevant measured quantities, such as maximum phase current, total power ...
- Condition monitoring information is used to assess the state of health and predict the remaining service life

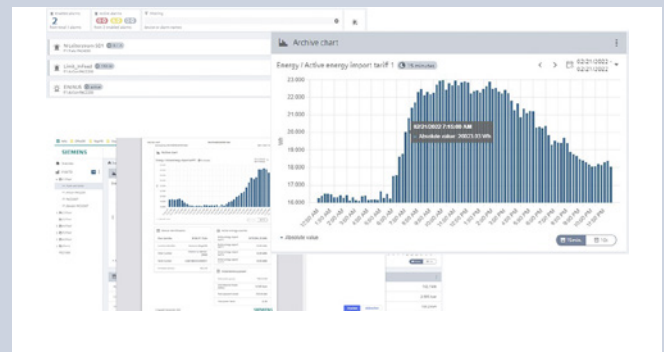
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Creation of customer-specific dashboards

Users can create their own dashboards (in addition to the standard "Overview" dashboard) by using widgets from the library to compile their own views of the most important information.



Example of a customer-specific dashboard



Several examples of the UI elements

Easy-to-operate user interface

Further UI elements provide additional operating convenience and more in-depth views of the collected data.

- The alarm widget serves as a convenient tool to obtain an overview of the active limit monitoring and any alarms that may be triggered.
 - In the archive graph widget, the 15min energy values (kWh) are displayed as a bar chart
 - The detailed display on "mouse over" shows the individual values in the bar chart with the corresponding date/time stamp
- Dashboards and their contents, e.g. results of data analysis can be printed using the web browser print function

SENTRON Powercenter

Wireless data acquisition and visualization in the final circuit

SENTRON Powercenter 1000

The SENTRON Powercenter 1000 data transceiver is designed to enable comprehensive data acquisition of communication and measuring-capable circuit protection devices. This increases transparency in the final circuit, through which optimization measures can be derived to increase system availability.

Up to 24 devices can communicate wirelessly with SENTRON Powercenter 1000 via radio link. This means that no increased installation effort is required for communication. Selected measured values of the circuit protection devices are stored in the data transceiver for up to 30 days. These can be visualized to ensure extensive data availability.

The compact design of the SENTRON Powercenter 1000, in a single modular width, results in an extremely small footprint in the distribution board so as to enable wireless, comprehensive data acquisition.

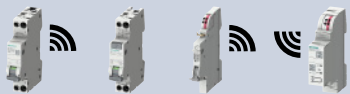
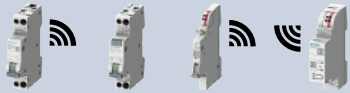




This is complemented by easy mounting on a 35 mm DIN rail and plug-in terminals for a 24 V DC power supply, which can be immediately looped through (daisy chain) to supply other devices.

The integrated Bluetooth interface enables simple on-site communication and commissioning via the SENTRON Powerconfig mobile app. Connection to various configuration or power monitoring systems, such as SENTRON Powerconfig, SENTRON Powermanager or customized solutions, is ensured via the Modbus TCP interface. Furthermore, this interface also enables a connection via e.g. SENTRON Powercenter 3000 or via LOGO! to cloud applications.

Mounting	Power supply	Devices that can be connected	Interfaces	Article No.
DIN-rail mounting	24 V DC SELV	24 circuit protection devices via radio link	2x Ethernet	7KN1110-0MC00

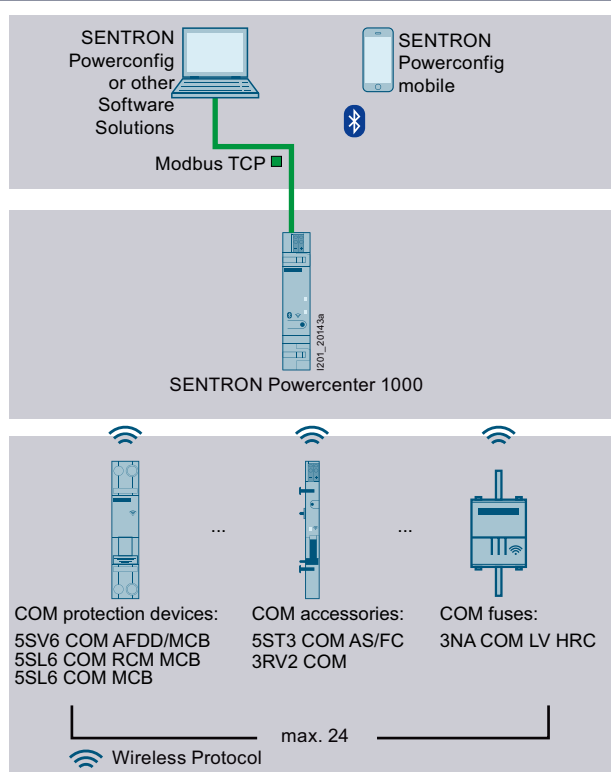
Note:

Please note the country-specific radio licenses of the products at www.siemens.com/lowvoltage/certificates (109801197)

Bundles	Scope of supply	Article No.
Bundle 1 	2x MCB 5SL6 COM B16 1x RCBO 5SV1 B16 1x AS/FC 5ST3 COM 1x SENTRON Powercenter 1000	7KN1110-0XC01
Bundle 2 	2x MCB 5SL6 COM C16 1x RCBO 5SV1 B16 1x AS/FC 5ST3 COM 1x SENTRON Powercenter 1000	7KN1110-0XC02
Bundle 3 	3x 3NA COM LV HRC fuse links 250 A gG 1x SENTRON Powercenter 1000 1x 3NP1 fuse switch disconnectors	7KN1110-0XC03
Bundle 4 	9x 3NA COM LV HRC fuse links 250 A gG 1x SENTRON Powercenter 1000 1x SENTRON Powercenter 3000	7KN1110-0XC04
Bundle 5 	9x 3NA COM LV HRC fuse links 250 A gG 1x SENTRON Powercenter 1000	7KN1110-0XC05
Bundle 6 	1x MCB 5SL6 COM B10 1x MCB 5SL6 COM B13 1x RCBO 5SV1 B13, short-time delayed G 1x AS/FC 5ST3 COM 1x SENTRON Powercenter 1000	7KN1110-0XC06



SENTRON Powercenter 1000 data transceiver



- Acquisition and storage of data and measured values from up to 24 communication-capable circuit protection devices via radio link
- Parameterization, visualization and further processing of the data in higher-level applications via Bluetooth and Modbus TCP



You will find further information under:
www.siemens.com/lowvoltage/manuals

Installation Manual – Circuit protection devices with communication and measuring function (109791805)

System Manual – Circuit protection devices with communication and measuring function (109791806)



SENTRON Powermind

Cloud-based solution for data visualization and analysis in power distribution systems



SENTRON Powermind is aimed equally at energy managers, facility managers and/or operators. For energy managers, predefined, automated representations and analyses of energy data are available, such as:

- Analysis of data in graphical form, e.g. lines, bars, heatmap, Sankey diagram, pie diagram and diagram of top 10 loads (can also be output in the form of a report)
- Comparison of energy consumption on weekdays versus weekends with percentage day-by-day representation of the distribution of energy consumption to identify unnecessary energy consumption
- Comparison of energy consumption and power import during a selected period as compared with a reference period to assess the effectiveness of energy efficiency measures
- Day-by-day representation of the 15 min power demand, incl. min and max values to assess power peaks

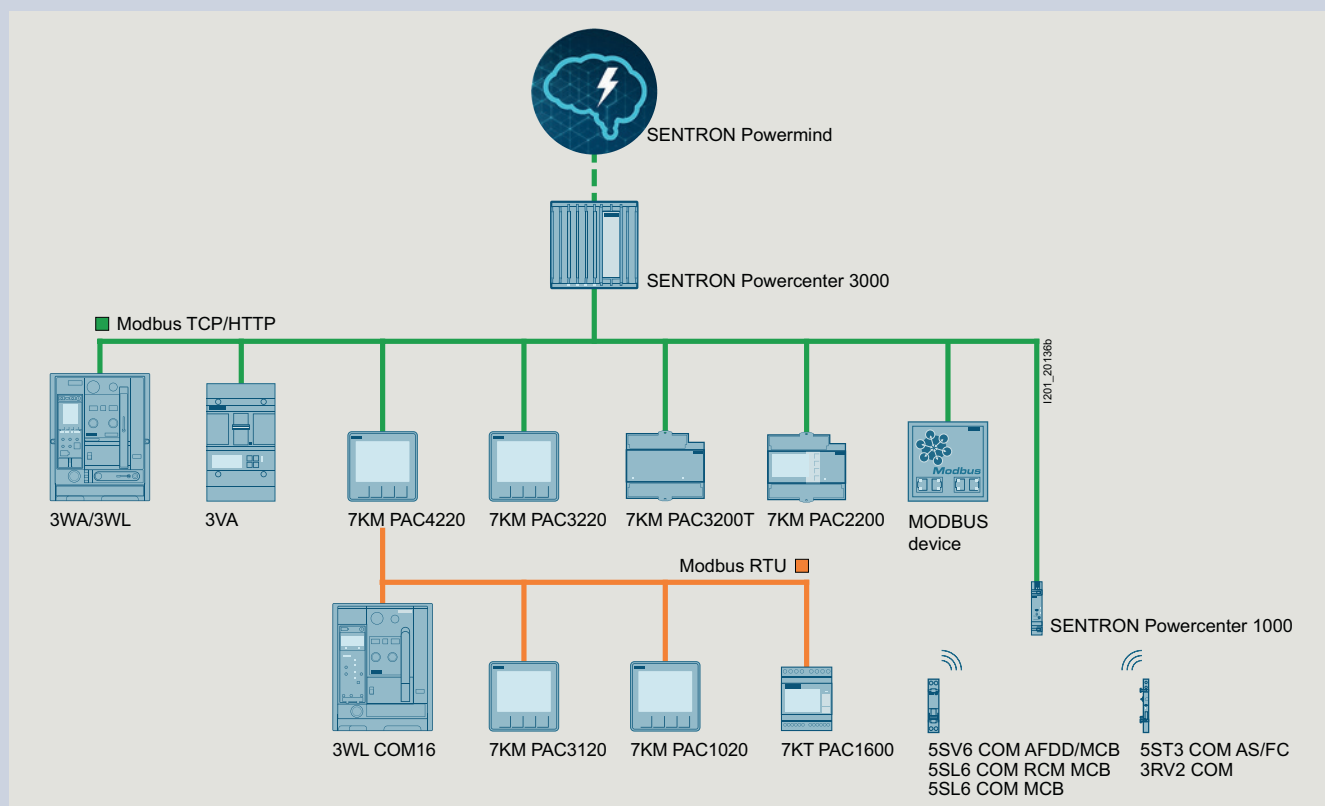
SENTRON Powermind offers operators and facility managers the following information and analyses:

- Status of the switching and protection devices, such as 3VA, 3WA and 3WL
- Display of the maximum current value of an individual phase in relation to I_n
- Condition monitoring information about the condition of the contact system of each circuit breaker and also as an overview of all circuit breakers
- The following devices are supported:
PAC1020, PAC2200/PAC2200CLP, PAC3100/PAC3120, PAC3200/PAC3200T/PAC3220, PAC4200 measuring devices,
3VA, 3WA and 3WL circuit breakers

You will find further information on the Insights Hub Store at

www.dex.siemens.com/industrial-iot/step-4-book-apps-and-extras/sentron-powermind

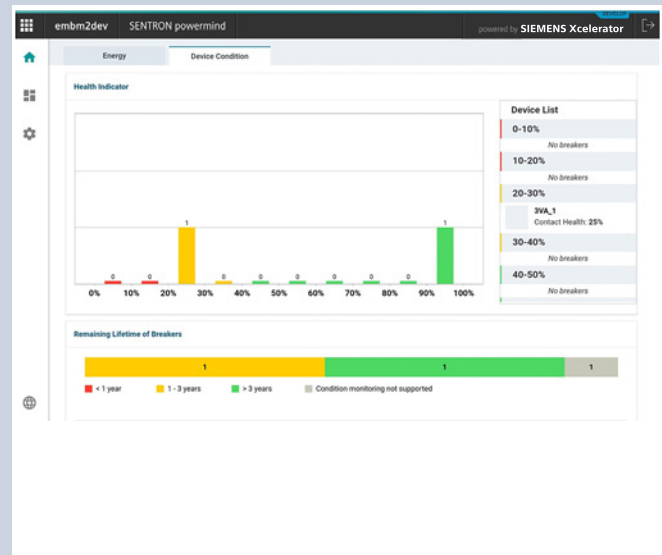
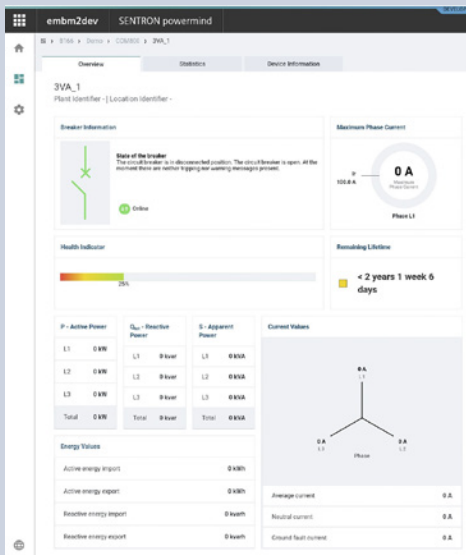
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A large number of devices transmit data via SENTRON Powercenter 3000 or SENTRON Powermanager to SENTRON Powermind

SENTRON Powermind processes data from SENTRON Powercenter 3000. No complex configuration or parameterization is required, as the necessary information is exchanged using files. This also prevents possible incorrect entries or write errors. An error-free connection can thus be easily established in just a few minutes.

The examples show some of the functions of SENTRON Powermind, which are aimed at different customer groups, such as energy managers and maintenance personnel, but also electricians. All information is available via a web browser on a standard PC, but also on mobile devices, such as tablets and smartphones. The information is therefore available both on-site (locally) and off-site (remotely).



Creating transparency

- Representation of the device status, e.g. open, closed, tripped and relevant measured quantities, such as maximum phase current, total power ...
- Information about the state of health of the device to take action proactively

Overview of the circuit breaker status

- Overview of the state of the health of all circuit breakers in the switchboard
- Assignment to a maintenance cycle (< 1 year; between 1 and 3 years; > 3 years)
- Display of circuit breakers in list form as well as link to the respective circuit breaker dashboard

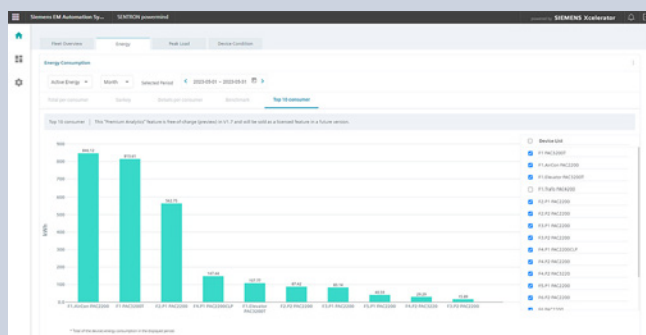
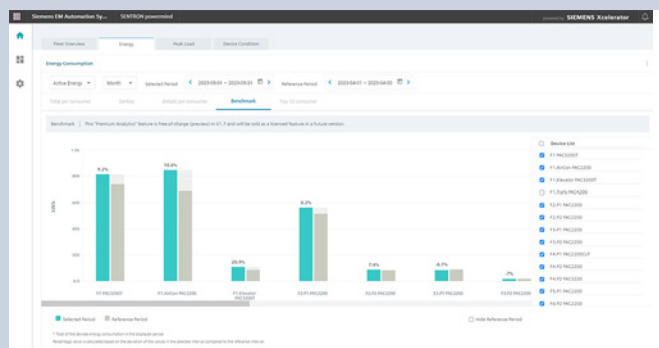
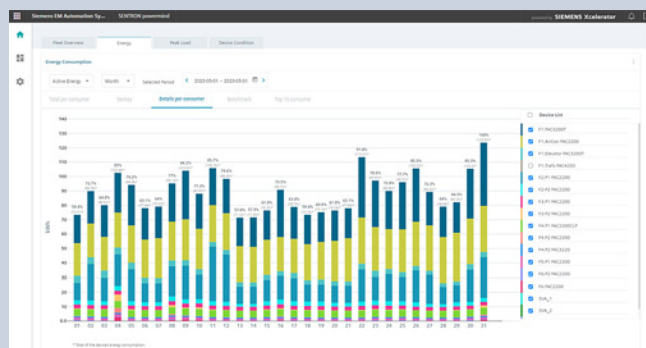
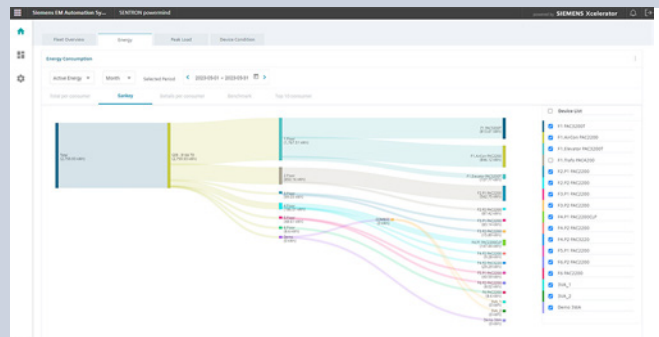
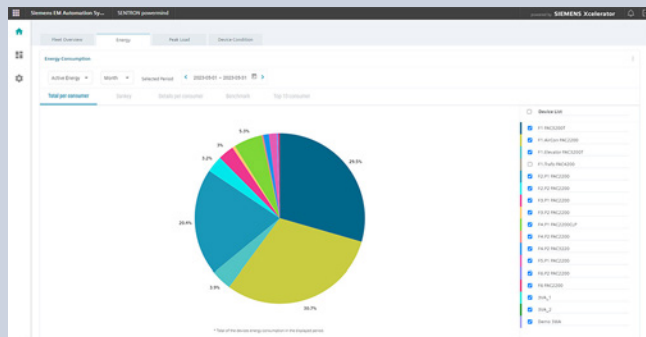


Energy management

- Comparison of the energy consumption of two periods, for example, to assess the effectiveness of energy saving measures
- Representation of the active power as mean and min/max values in a line diagram or heatmap

SENTRON Powermind

Cloud-based solution for data visualization and analysis in power distribution systems



Creating transparency and analyzing energy data

- Representation of the power flow/power import in various parts of the power distribution system
- Analysis of energy consumption in a freely selectable period (Total, Details, Sankey, Top 10) or in comparison to another period (benchmark), including percentage and absolute deviation; applicable to the overall system, system components and individual loads

SIMATIC Modbus/TCP SENTRON PAC

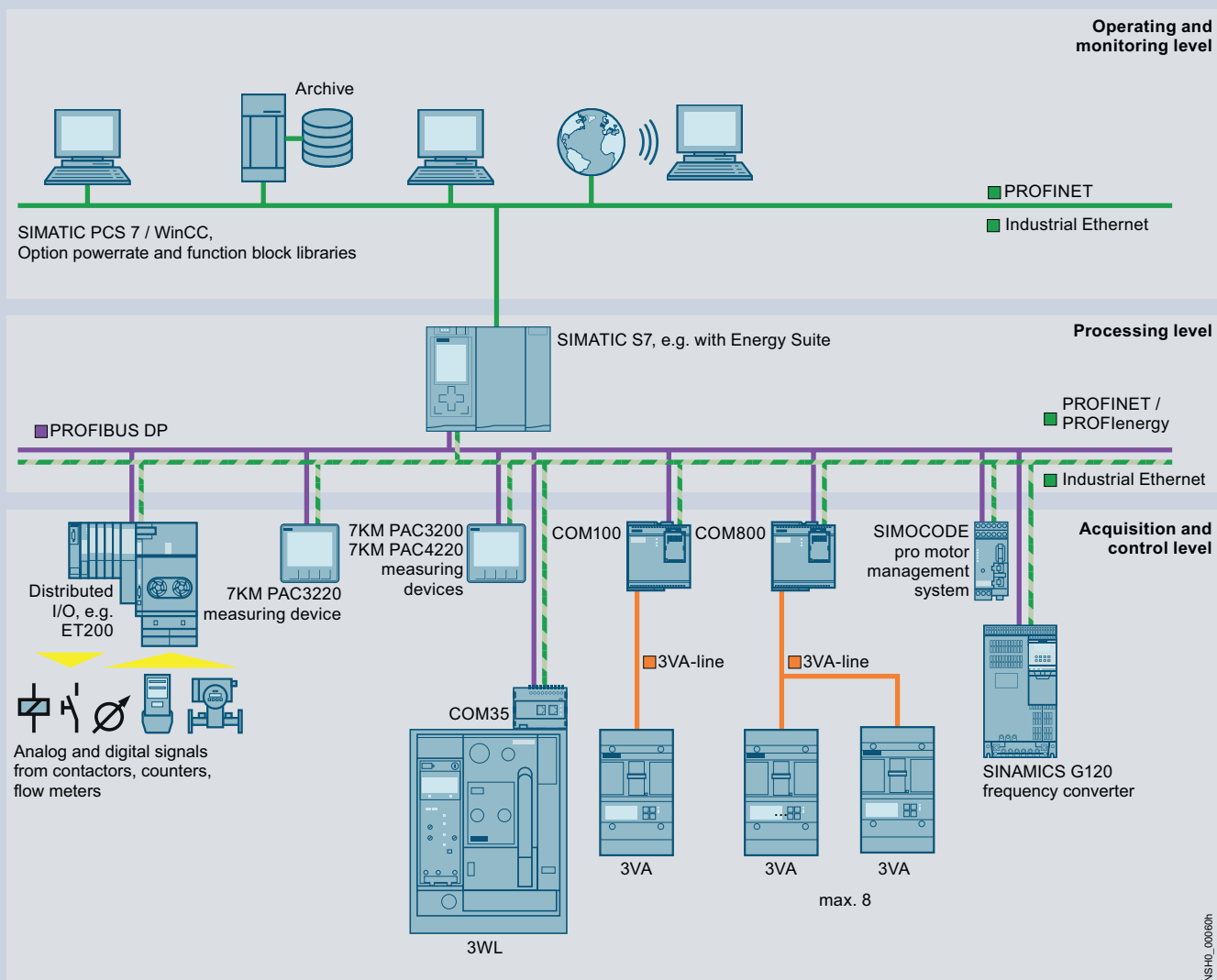
For 7KM PAC3200/4200 measuring devices

Use and version	Valid for	Type	Article No.
Communication via the integrated PN interface for reading values out of PAC3200 and PAC4200 devices, single license	1 CPU and up to 20 SENTRON PACs	Modbus/TCP 20 SENTRON PAC	6AV6676-6MA30-0AX0
	1 CPU and up to 100 SENTRON PACs	Modbus/TCP 100 SENTRON PAC	6AV6676-6MA30-1AX0
	1 CPU and up to 512 SENTRON PACs	Modbus/TCP 512 SENTRON PAC	6AV6676-6MA30-2AX0

PAC/3WL/3VA SIMATIC PCS 7 library

For 7KM PAC3200/3220/4200 measuring devices and 3WL/3VA/3VL circuit breakers

Use	Version	Type of delivery	Article No.
PAC/3WL/3VA SIMATIC PCS 7 library <ul style="list-style-type: none"> AS blocks and faceplates for integrating the 3WL/3VA/3VL circuit breakers into SIMATIC PCS 7, V8.x, V9.0 SP2 or V9.1 For each SIMATIC PCS 7 Operator Station of the single station/server version, a license containing the following is required: <ul style="list-style-type: none"> Engineering license for one SIMATIC PCS 7 Operator Station of the single station/server version Runtime license for one automation system (1 required per automation system, further AS runtime licenses can be ordered separately) 	Engineering and runtime software, software class A, 2-language (English, German), single license for one installation	Software and electronic documentation as a software download, engineering and runtime license as Certificate of License	7KN2780-OCE24-0YAO
AS runtime license for PAC/3WL/3VA library for SIMATIC PCS 7 License for one automation system in each case	Runtime software, software class A, 2-language (English, German), single license for one installation	Runtime license as Certificate of License without software and documentation	7KN2780-OCE00-0YCO



7KM PAC measuring devices

Basic units



Connections	Power supply	Display	Interface	MID	PTB-A50.7	7KM PAC1020	7KM PAC2200/PAC2200CLP	7KM PAC3200T
Transformer measurement								
Screw terminals	Self-powered	With	M-Bus	With	Without	–	7KM2200-2EA30-1GA1	–
				Without	Without	–	7KM2200-2EA30-1CA1	–
				With	Without	–	7KM2200-2EA30-1HA1	–
				Without	Without	–	7KM2200-2EA30-1DA1	–
				Without	Without	–	7KM2200-2EA30-1EA1	–
			Modbus TCP	With	With	–	7KM2200-2EA00-1JB1	–
				Without	Without	–	7KM2200-2EA30-1JA1	–
				Without	Without	–	7KM2200-2EA30-1EA1	–
				Without	Without	–	7KM1020-0BA01-1DA0	–
				Without	Without	–	7KM3200-0CA01-1AA0	–
AC/DC wide-range power supply unit	With	Modbus RTU	Without	Without	–	–	–	
		Modbus TCP	Without	Without	–	–	–	
DC power supply unit with extra-low voltage	With	Modbus TCP	Without	Without	–	–	–	
		Modbus RTU	Without	Without	–	–	–	
Ring cable lug connection	AC/DC wide-range power supply unit	With	Modbus TCP	Without	Without	–	–	
Direct measurement								
Screw terminals	Self-powered	With	M-Bus	With	Without	–	7KM2200-2EA40-1GA1	–
				Without	Without	–	7KM2200-2EA40-1CA1	–
				With	Without	–	7KM2200-2EA40-1HA1	–
				Without	Without	–	7KM2200-2EA40-1DA1	–
				Without	Without	–	7KM2200-2EA40-1EA1	–
			Modbus TCP	With	With	–	7KM2200-2EA40-1JB1	–
				Without	Without	–	7KM2200-2EA40-1JA1	–
				Without	Without	–	7KM2200-2EA40-1EA1	–

Further technical specifications

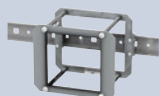
	7KM1020-..	7KM2200-..	7KM3200-..	7KM3120-0..	7KM3120-1..	
Basic data						
Installation	Front mounting	DIN rail		Front mounting		
Mounting width	–	6 MW		–		
Control panel instrument	96 × 96 mm	–		96 × 96 mm		
External auxiliary voltage	50/60 Hz AC	100 ... 250 V	–	90 ... 276 V	100 ... 250 V ±10%	–
	DC	110 ... 250 V ±10%	–	110 ... 275 V	110 ... 250 V ±10%	24 ... 60 V ±20%
Measuring inputs						
Transformer connection	Secondary input current I_e	x/1 A or x/5 A	x/1 A or x/5 A		x/1 A or x/5 A	
Direct connection	Input voltage U_e 3 50/60 Hz AC	400/230 V		690/400 V		
	Rated current I_n	–	65 A	–		

7KM PAC measuring devices

Accessories

7KM PAC1020
7KM PAC3100
7KM PAC3120
7KM PAC3200
7KM PAC3220
7KM PAC4200
7KM PAC4220

7KM PAC TMP2 DIN-rail adapter



- Two-tier adapter for mounting a measuring device on a DIN rail
- Front display
- For manual intervention

7KM9900-0XA00-0AA0

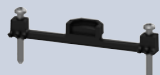
7KM PAC TMP mounting plate



- Adapter for mounting a measuring device on DIN rail
- Display faces backwards towards DIN rail
- Readout and evaluation of measurements solely via mains operation

7KM9900-0YA00-0AA0

Compact holder



- Device holder for 7KM PAC1020/3100/3120/3200/3220/4200
- 10 holders for 5 PAC devices
- For seamless side-by-side mounting of the devices (without spaces)

7KM9900-0GA00-0AA0

7KM PAC3100
7KM PAC3200
7KM PAC4200

7KM PAC3120
7KM PAC3220
7KM PAC4220

Spare parts for 7KM PAC



- Spare parts comprising:
 - Device holders for panel mounting (2X)
Note: can also be used for 7KM PAC3120/3220
 - Screw terminal for connection of voltage inputs
 - Screw terminal for connection of current inputs
 - Terminal block inputs/outputs for 7KM PAC3100/4200
 - Terminal block inputs/outputs for 7KM PAC3200
 - RS485 terminal blocks for 7KM PAC3100

7KM9900-0SA00-0AA0

–

- Spare part package comprising:
 - Device holders for panel mounting

– 7KM9900-0SA00-0AA0

7KM PAC2200
7KM PAC2200CLP
7KM PAC2200 MID
7KM PAC3200T






SENTRON PROFINET Proxy SPP2000



- Proxy for transition from Modbus TCP-capable measuring devices to PROFINET IO. Connection of up to 8 devices from the PAC2200, PAC2200CLP, PAC2200 MID and PAC3200T product ranges
- PROFINET Conformance Class C
- Two switched ports
- Integration in TIA by means of GSDML file

7KM9300-0PP20-0AA0

Expansion and communication modules

		7KM PAC3220 7KM PAC4200 7KM PAC4220	COM100/800 (3VA)
7KM Switched Ethernet PROFINET communication module			
	<ul style="list-style-type: none"> • Latest PROFINET switching properties • S2 system redundancy for operation in H systems • CiR Configuration in Run • Firmware update via the modules for PAC4200 and PAC3220 		
		7KM9300-0AE02-0AA0	
7KM PROFIBUS DP communication module			
			
		7KM9300-0AB01-0AA0	
7KM RS485 communication module			
			
		7KM9300-0AM00-0AA0 ¹⁾	
7KM PAC 4DI/2DO expansion module			
			
		7KM9200-0AB00-0AA0	–
7KM PAC I(N), I(Diff), analog expansion module			
	<ul style="list-style-type: none"> • To add the following functions to the measuring inputs: <ul style="list-style-type: none"> – N conductor measurement – Two analog inputs, also for measuring non-electrical quantities such as temperature, water or air pressure – Residual current measurement via type A or type B summation current transformers 		
		7KM9200-0AD00-0AA0	–

¹⁾ Suitable for 7KM PAC4200/4220 (especially for the Modbus TCP/RTU Gateway)

Residual-current transformers for 7KM PAC I(N), I(Diff), analog expansion module, [from page 11/1 onwards](#)

7KT PAC measuring devices

PAC1600 basic unit



Connections	Version	Power supply	Display	Interface	MID	7KT PAC1600	
Transformer measurement							
Screw terminals	3-phase	Self-powered	With	Modbus RTU	Without	7KT1661	
					With	7KT1662	
				M-Bus	Without	7KT1663	
					With	7KT1664	
				SO interface	Without	7KT1672	
	With	7KT1673					
	3-phase, universal	Auxiliary power: 100 ... 240 V AC, 110 ... 250 V DC 50/60Hz	With	–	Without	7KT1681	
				Modbus RTU	Without	7KT1682	
	Direct measurement						
	Screw terminals	1-phase	Self-powered	With	Modbus RTU	Without	7KT1651
With						7KT1652	
M-Bus					Without	7KT1653	
					With	7KT1654	
SO interface					Without	7KT1655	
					With	7KT1656	
3-phase					Self-powered	With	Modbus RTU
		With	7KT1666				
		M-Bus	Without	7KT1667			
			With	7KT1668			
		SO interface	Without	7KT1670			
			With	7KT1671			

PAC1200 multichannel current measuring system

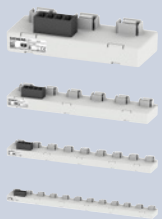


Connections	Version	Power supply	Display	Interface	MID	7KT PAC1200
Direct measurement						
Screw terminals	3-phase	Self-powered	Without	Modbus TCP	Without	7KT1260

PAC1200

7KT PAC1200

Data manager with 7KT1260, sensor bars



Number of connections	Article No.
3	7KT1233
6	7KT1236
9	7KT1238
12	7KT1242

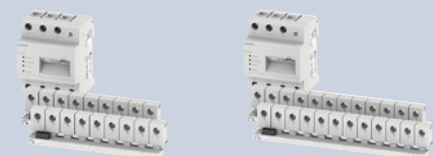
Data manager with 7KT1260, sensors



Current I_e	Article No.
40 A	7KT1254
63 A	7KT1255

10

PAC1200 Bundles



Data manager	Sensor bars	Sensors	18 bundle	24 bundle
1× data manager 7KT1260	2× 9-sensor bar 7KT1238	18× sensors 40 A 7KT1254	7KT1222	–
	2× 12-sensor bar 7KT1242	24× sensors 40 A 7KT1254	–	7KT1223

SEM3 multichannel current measuring system

Data manager



Connections	Version	Power supply	Display	Interface	MID	
Transformer measurement						
Screw terminals	3-phase	Self-powered	Without	Modbus TCP RS485 Modbus RTU	Without	US2:SEM3CONTROLLER

Further technical specifications

SEM3

Basic data	
Installation	Screw mounting
Measuring inputs	
Max. input voltage 50/60 Hz AC	480 V/277 V
Standard current transformers	50 ... 1200 A/0.1 A
Folding transformer	50 ... 2000 A/0.1 A

Accessories

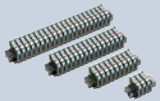
Metering modules



- For recording measured values
- Accuracy of 0.2% or 1% for the entire measurement including current transformer
- Simple setting of phase configuration by means of slide switch
- Connection of a current transformer for measuring a phase
- Metering module is plugged into meter rack

Measuring accuracy	Article No.
0.2%	US2:SEM3PHAMETER
1%	US2:SEM3PLAMETER

Meter racks



Version	Article No.
For 3 metering modules	US2:SEM3RACK3
For 9 metering modules	US2:SEM3RACK9
For 15 metering modules	US2:SEM3RACK15
For 21 metering modules	US2:SEM3RACK21

Connecting cables



- 600 V insulated special cable for connecting meter racks to the data manager

Length	Article No.
0.3 m	US2:SEM3CAB12INCH
0.6 m	US2:SEM3CAB24INCH
0.9 m	US2:SEM3CAB36INCH

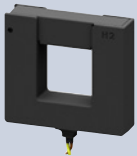
Standard current transformers



- Standard power cable brown and yellow, 1.82 m long
- Can be extended up to 100 m while still maintaining accuracy
- Transformer configuration is carried out in the data manager

Output signal	Transformer transmission ratio	Article No.
100 mA	50: 0.1	US2:SEM3SCCT50
	125: 0.1	US2:SEM3SCCT125
	250: 0.1	US2:SEM3SCCT250
	400: 0.1	US2:SEM3SCCT400
	600: 0.1	US2:SEM3SCCT600
	800: 0.1	US2:SEM3SCCT800
	1200: 0.1	US2:SEM3SCCT1200

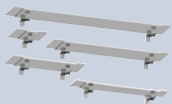
Folding transformers



- Standard power cable brown and yellow, 1.82 m long
- Can be extended up to 100 m while still maintaining accuracy
- Transformer configuration is carried out in the data manager

Output signal	Transformer transmission ratio	Article No.
100 mA	50: 0.1	7KT1280-5MA00
	125: 0.1	7KT1280-5MA01
	250: 0.1	7KT1280-5MA02
	400: 0.1	7KT1280-5MA03
	600: 0.1	7KT1280-5MA04
	800: 0.1	7KT1280-5MA05
	1200: 0.1	7KT1280-5MA06
	1600: 0.1	7KT1280-5MA07
	2000: 0.1	7KT1280-5MA08

DIN-rail adapters



- 5 adapters for snapping onto DIN rail
- 1 adapter each for data manager and for meter racks with 3, 9, 15 and 21 metering modules
- Adapters are screwed onto the data manager or the meter racks

Article No.
US2:SEM3DINKIT

SEM3T multichannel temperature measuring system

Data manager for thermal monitoring in electrical systems



Connections	Version	Power supply	Display	Interface	
Plug-in connectors	Temperature measurement	24 V DC	Without	Modbus TCP	7KT1281-0AA00
				Modbus TCP/Wi-Fi	7KT1281-0AA10

Further technical specifications

SEM3T

Basic data	
Installation	DIN-rail mounting
Measuring inputs	
Temperature sensors	0 to 130 °C

Accessories

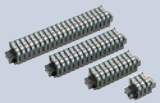
Metering module



- For recording measured values
- No configuration necessary for modules
- Connection of a temperature sensor
- Metering module is plugged into meter rack

Article No.
7KT1281-1AA00

Meter racks



Version	Article No.
For 3 metering modules	US2:SEM3RACK3
For 9 metering modules	US2:SEM3RACK9
For 15 metering modules	US2:SEM3RACK15
For 21 metering modules	US2:SEM3RACK21

Connecting cables



- 600 V insulated special cable for connecting meter racks to the data manager

Length	Article No.
0.3 m	US2:SEM3CAB12INCH
0.6 m	US2:SEM3CAB24INCH
0.9 m	US2:SEM3CAB36INCH

Temperature sensors

- Standard connection cable, brown and yellow, 3 m long
- Can be extended up to 15 m while still maintaining accuracy
- Configuration is carried out in the data manager



Version	Size	Article No.
Sensors with ring cable lugs	Sensor 1/4"	7KT1281-2SA00
	Sensor 5/16"	7KT1281-2SA01
	Sensor 3/8"	7KT1281-2SA02
	Sensor 1/2"	7KT1281-2SA03
Cylindrical sensor		7KT1281-2CA00

Time and pulse counters

Mechanical counting mechanisms



Display	Resetting	Rated frequency	Rated control supply voltage U_c	48 × 48 mm	72 × 72 mm	–
Time counter						
00000.00 h	Without	–	10 ... 80 V DC	7KT5500	–	–
			10 ... 50 V DC	–	7KT5600	–
			12 ... 24 V DC	–	–	7KT5801
		50 Hz	24 V AC	7KT5505	–	7KT5802
			115 V AC	7KT5501	7KT5601	7KT5803
			230 V AC	7KT5502	7KT5602	7KT5804
		60 Hz	115 V AC	7KT5503	7KT5603	7KT5806
			230 V AC	7KT5504	7KT5604	7KT5807
Pulse counter						
0000000	Without	–	12 ... 24 V DC	–	–	7KT5811
		50/60 Hz	24 V AC	–	–	7KT5812
			230 V AC	–	–	7KT5814

Further technical specifications

	7KT55..	7KT56..	7KT58..
Basic data			
Installation	Front mounting		DIN-rail mounting
Mounting width	–		2 MW
Front frame	48 × 48 mm	72 × 72 mm	–
Display	Drum-type register		
Version	–	With narrow frame according to DIN 43700	–

Accessories

	7KT55..	7KT56..	7KT58..
Cover			
Size	Article No.	Article No.	Article No.
55 × 55 mm	7KT9020	–	–
Sealing ring for cover			
Degree of protection	Scope of supply	Article No.	Article No.
IP43 (in control panels with smooth surfaces)	1 set = 5 units	7KT9000	–
Terminal cover			
Degree of protection	Article No.	Article No.	Article No.
IP20 (with connected conductors)	–	7KT9021	–

Electronic counting mechanisms



Display	Resetting	Rated frequency	Rated control supply voltage U_c	
Time counter				
000000.0 h	Without	50/60 Hz	24 ... 240 V AC, 12 ... 150 V DC	7KT5821
	Electrical	50/60 Hz	24 ... 240 V AC, 12 ... 150 V DC	7KT5822
	Electrical and mechanical	50/60 Hz	24 ... 240 V AC, 12 ... 150 V DC	7KT5823
Pulse counter				
0000000	Electrical and mechanical	50/60 Hz	24 ... 240 V AC, 12 ... 150 V DC	7KT5833

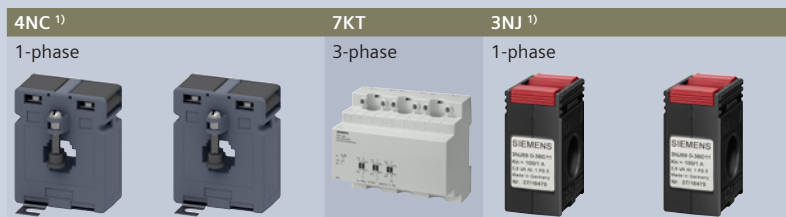
Further technical specifications

7KT58..

Basic data	
Installation	DIN-rail mounting
Mounting width	2 MW
Display	LCD display

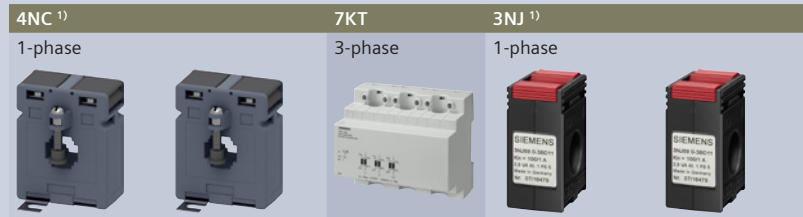
Current transformers

Bushing-type current transformers for measurement purposes



Size	Insulation level U_m	Rated primary current I_{pr}	Rated power P_n	Secondary rated current I_{sr}				
				$I_{sr} = 5\text{ A}$	$I_{sr} = 1\text{ A}$	$I_{sr} = 5\text{ A}$	$I_{sr} = 5\text{ A}$	$I_{sr} = 1\text{ A}$
Accuracy class 0.2s								
1	720 V	150 A	1 VA	4NC5121-2FA21	–	–	–	–
		200 A	2.5 VA	4NC5122-2FC21	–	–	–	–
		250 A	2.5 VA	4NC5123-2FC21	–	–	–	–
		300 A	5 VA	4NC5124-2FE21	–	–	–	–
		400 A	5 VA	4NC5125-2FE21	–	–	–	–
5	720 V	500 A	5 VA	4NC5126-2FE21	–	–	–	–
		600 A	5 VA	4NC5227-2FE21	–	–	–	–
		700 A	5 VA	4NC5228-2FE21	–	–	–	–
		800 A	5 VA	4NC5231-2FE21	–	–	–	–
		1000 A	5 VA	4NC5232-2FE21	–	–	–	–
Accuracy class 0.5								
1	720 V	100 A	1 VA	4NC5117-2DA21	4NC5117-0DA21	–	–	–
		150 A	2.5 VA	4NC5121-2DC21	4NC5121-0DC21	–	–	–
		200 A	5 VA	4NC5122-2DE21	4NC5122-0DE21	–	–	–
		250 A	5 VA	4NC5123-2DE21	4NC5123-0DE21	–	–	–
2	720 V	200 A	5 VA	4NC5222-2DE21	4NC5222-0DE21	–	–	–
		250 A	5 VA	4NC5223-2DE21	4NC5223-0DE21	–	–	–
		300 A	5 VA	4NC5224-2DE21	4NC5224-0DE21	–	–	–
		400 A	5 VA	4NC5225-2DE21	4NC5225-0DE21	–	–	–
3	720 V	400 A	5 VA	4NC5325-2DE21	4NC5325-0DE21	–	–	–
		500 A	5 VA	4NC5326-2DE21	4NC5326-0DE21	–	–	–
		600 A	5 VA	4NC5327-2DE21	4NC5327-0DE21	–	–	–
		750 A	5 VA	4NC5330-2DE21	4NC5330-0DE21	–	–	–
4	720 V	800 A	5 VA	4NC5331-2DE21	–	–	–	–
		800 A	10 VA	4NC5431-2DH21	4NC5431-0DH21	–	–	–
		1000 A	10 VA	4NC5432-2DH21	4NC5432-0DH21	–	–	–
		1200 A	10 VA	4NC5433-2DH21	4NC5433-0DH21	–	–	–
		1500 A	10 VA	4NC5435-2DH21	4NC5435-0DH21	–	–	–
		1600 A	15 VA	4NC5436-2DK21	–	–	–	–
		2000 A	20 VA	4NC5438-2DL21	–	–	–	–
		2500 A	25 VA	4NC5440-2DM21	–	–	–	–
		3000 A	30 VA	4NC5441-2DN21	–	–	–	–
Accuracy class 0.5 calibrated								
–	720 V	100 A	1.5 VA	–	–	–	3NJ6920-3BD23	3NJ6920-3BD13
		150 A	2.5 VA	–	–	–	3NJ6920-3BE23	3NJ6920-3BE13
		300 A	5 VA	–	–	–	3NJ6940-3BH23	3NJ6940-3BH13
		400 A	5 VA	–	–	–	3NJ6940-3BJ23	3NJ6940-3BJ13
		500 A	5 VA	–	–	–	3NJ6940-3BK23	3NJ6940-3BK13
		600 A	5 VA	–	–	–	3NJ6940-3BL23	3NJ6940-3BL13

¹⁾ Overcurrent limiting factor FS5



Size	Insulation level U_m	Rated primary current I_{pr}	Rated power P_n	Secondary rated current I_{sr}				
				$I_{sr} = 5\text{ A}$	$I_{sr} = 1\text{ A}$	$I_{sr} = 5\text{ A}$	$I_{sr} = 5\text{ A}$	$I_{sr} = 1\text{ A}$
Accuracy class 1.0								
1	720 V	50 A	1.2 VA	4NC5112-2CB21	4NC5112-0CB21	–	–	–
		60 A	1.2 VA	4NC5113-2CB21	4NC5113-0CB21	–	–	–
			1.25 VA	–	–	7KT1200	–	–
		75 A	2.5 VA	4NC5115-2CC21	4NC5115-0CC21	–	–	–
		100 A	2.5 VA	4NC5117-2CC21	4NC5117-0CC21	7KT1201	–	–
		150 A	2.5 VA	4NC5121-2CC21	4NC5121-0CC21	–	–	–
			3.75 VA	–	–	7KT1202	–	–
2	720 V	200 A	5 VA	4NC5122-2CE21	4NC5122-0CE21	–	–	–
		250 A	5 VA	4NC5123-2CE21	4NC5123-0CE21	–	–	–
		300 A	5 VA	4NC5222-2CE21	4NC5222-0CE21	–	–	–
		400 A	5 VA	4NC5223-2CE21	4NC5223-0CE21	–	–	–
		500 A	5 VA	4NC5224-2CE21	4NC5224-0CE21	–	–	–
3	720 V	400 A	5 VA	4NC5225-2CE21	4NC5225-0CE21	–	–	–
		500 A	5 VA	4NC5325-2CE21	4NC5325-0CE21	–	–	–
		600 A	5 VA	4NC5326-2CE21	4NC5326-0CE21	–	–	–
		750 A	5 VA	4NC5327-2CE21	4NC5327-0CE21	–	–	–
4	720 V	800 A	10 VA	4NC5330-2CE21	4NC5330-0CE21	–	–	–
		1000 A	10 VA	4NC5431-2CH21	4NC5431-0CH21	–	–	–
		1250 A	10 VA	4NC5432-2CH21	4NC5432-0CH21	–	–	–
		1500 A	10 VA	4NC5434-2CH21	4NC5434-0CH21	–	–	–
		2000 A	10 VA	4NC5435-2CH21	4NC5435-0CH21	–	–	–
		2500 A	12.5 VA	4NC5438-2CJ21	4NC5438-0CJ21	–	–	–
		3000 A	12.5 VA	4NC5440-2CJ21	4NC5440-0CJ21	–	–	–
			30 VA	4NC5441-2CN21	–	–	–	–

¹⁾ Overcurrent limiting factor FS5

Accessories

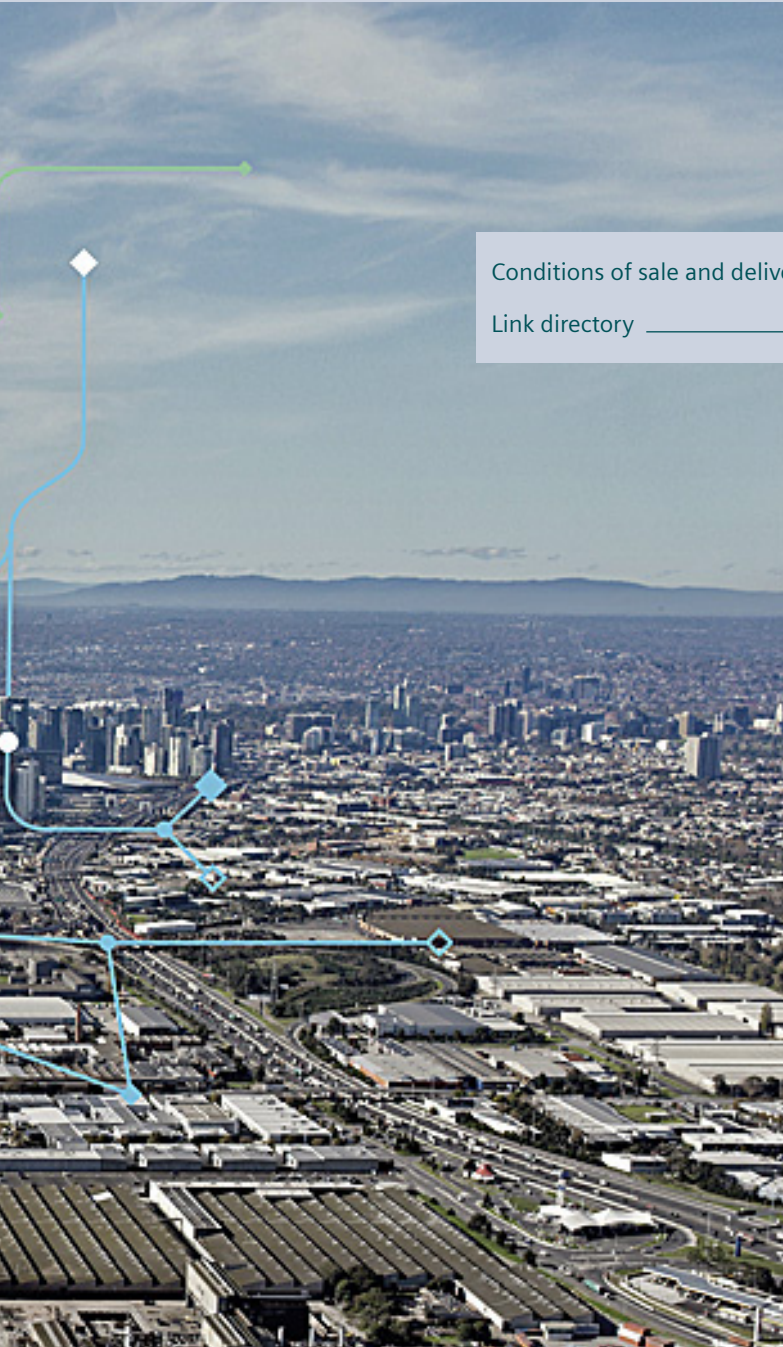
DIN-rail mounting



For transformer size	Article No.	Article No.	Article No.	Article No.	Article No.
1 and 5	4NC5923-5LT21	4NC5923-5LT21	–	–	–
2	4NC5925-5LT21	4NC5925-5LT21	–	–	–
3	4NC5930-5LT21	4NC5930-5LT21	–	–	–
4	4NC5940-5LT21	4NC5940-5LT21	–	–	–



Appendix



Conditions of sale and delivery _____ A/2

Link directory _____ A/4

Conditions of sale and delivery

1. General Provisions

By using this catalog you can purchase hard- and software products as well as services (together hereinafter referred to as "products") described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as "T&C"). Note, for products purchased from any Siemens entity having a registered office outside of Germany, the respective terms and conditions of sale and delivery of the respective Siemens entity apply exclusively. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

1.1 For customers with a seat or registered office in European Union

For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the text of the product description, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the "General Conditions for Software Products for Infrastructure & Industry Business (German law)"¹⁾ and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen für Infrastructure & Industry Geschäft (Deutsches Recht)"¹⁾ (available only in German) and/or
- for other services, the "Supplementary Terms and Conditions for Services for Infrastructure & Industry Business (German Law) ("BL")"¹⁾ and/or
- for other products the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"¹⁾.

In case such products should contain Open Source Software, the conditions of which shall prevail over the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"¹⁾, the Product will be given a note as to which special conditions apply to this open source software. This shall apply mutatis mutandis for notices referring to other third-party software components.

1.2 For customers with a seat or registered office outside European Union

For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the "Standard Terms and Conditions for Consulting Services for Infrastructure & Industry Business (Swiss Law)"¹⁾ and/or
- for other services the "International Terms & Conditions for Services"¹⁾ supplemented by "Software Licensing Conditions"¹⁾ and/or
- for other products the "International Terms & Conditions for Products"¹⁾ supplemented by "Software Licensing Conditions"¹⁾

1.3 For customers with master or framework agreement

To the extent products offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T&C.

2. Additional Terms and Conditions

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the individual pages of this catalog – especially with regard to data, dimensions and weights given – these are subject to change without prior notice.

¹⁾ The text of the Terms and Conditions of Siemens AG can be downloaded at https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

3. Export Control and Sanctions Compliance

3.1 General

Customer shall comply with all applicable sanctions, embargoes and (re-)export control laws and regulations, and, in any event, with those of the European Union, the United States of America and any locally applicable jurisdiction (collectively "Export Regulations").

3.2 Checks for Products

Prior to any transaction by customer concerning products (including hardware, documentation and technology) delivered by Siemens, or products (including maintenance and technical support) performed by Siemens with a third party, customer shall check and certify by appropriate measures that

- (i) the customer's use, transfer, or distribution of such products, the brokering of contracts or the provision of other economic resources in connection with products will not be in violation of any Export Regulations, also taking into account any prohibitions to circumvent these (e.g., by undue diversion)
- (ii) the products are not intended or provided for prohibited or unauthorized non-civilian purposes (e.g. armaments, nuclear technology, weapons, or any other usage in the field of defense and military);
- (iii) customer has screened all direct and indirect parties involved in the receipt, use, transfer, or distribution of the products against all applicable restricted party lists of the Export Regulations concerning trading with entities, persons and organizations listed therein and
- (iv) products within the scope of items-related restrictions, as specified in the respective annexes to the Export Regulations, will not, unless permitted by the Export Regulations, be (a) exported, directly or indirectly (e.g., via Eurasian Economic Union (EAEU) countries), to Russia or Belarus, or (b) resold to any third party business partner that does not take a prior commitment not to export such products to Russia or Belarus.

3.3 Non-Acceptable Use of Software and Cloud Services

Customer shall not, unless permitted by the Export Regulations or respective governmental licenses or approvals,

- (i) download, install, access or use the products from or in any location prohibited by or subject to comprehensive sanctions or subject to license requirements according to the Export Regulations;
 - (ii) grant access to, transfer, (re-)export (including any "deemed (re-)exports"), or otherwise make available the products to any entity, person, or organization identified on a restricted party list of the Export Regulations;
 - (iii) use the products for any purpose prohibited by the Export Regulations (e.g. use in connection with armaments, nuclear technology or weapons);
 - (iv) upload to a products platform any customer content unless it is non-controlled (e.g. in the EU: AL = N; in the U.S.: ECCN = N or EAR99);
 - (v) facilitate any of the afore mentioned activities by any user.
- Customer shall provide all users with all information necessary to ensure compliance with the Export Regulations.

3.4 Semiconductor Development

Customer will not, without advance written authorization from Siemens, use offerings for the development or production of integrated circuits at any semiconductor fabrication facility located in China meeting the criteria specified in the U.S. Export Administration Regulations, 15 C.F.R. 744.23.

3.5 Information

Upon request by Siemens, customer shall promptly provide Siemens with all information pertaining to users, the intended use and the location of use or the final destination (in the case of hardware, documentation and technology) of the products. Customer will notify Siemens prior to customer disclosing any information to Siemens that is defense-related or requires controlled or special data handling pursuant to applicable government regulations, and will use the disclosure tools and methods specified by Siemens.

3.6 Reservation

Siemens shall not be obligated to fulfill this agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions. Customer acknowledges that Siemens may be obliged under the Export Regulations to limit or suspend access by customer and/or users to products.

4. Miscellaneous

Errors excepted and subject to change without prior notice.

Link directory

Catalog LV 10

General information

Information on low-voltage power distribution and electrical installation technology	www.siemens.com/lowvoltage
Tender specifications	www.siemens.com/tenderspecifications
Conversion tool	www.siemens.com/conversion-tool
Image database	www.siemens.com/lowvoltage/picturedb
CAX download manager	www.siemens.com/cax
Newsletter system	www.siemens.com/lowvoltage/newsletter
Siemens YouTube channel	www.youtube.com/Siemens
Catalog LV 10	www.siemens.com/lv10
Catalog LV 13	www.siemens.com/lv13
Catalog LV 18	www.siemens.com/lv18
Brochures/catalogs	www.siemens.com/lowvoltage/catalogs
Operating instructions/manuals	www.siemens.com/lowvoltage/manuals
SiePortal (knowledge base)	www.siemens.com/lowvoltage/product-support
SiePortal (product catalog)	www.siemens.com/lowvoltage/product-catalog
My Documentation Manager (MDM)	www.siemens.com/lowvoltage/mdm
Configurators	www.siemens.com/lowvoltage/configurators
Direct forwarding to SiePortal	www.siemens.com/product_catalog_SIEP?Article No.
Training	www.siemens.com/sitrain-lowvoltage
Local contacts	www.siemens.com/lowvoltage/contact www.siemens.com/lowvoltage/components/contact www.siemens.com/lowvoltage/systems/contact www.siemens.com/lowvoltage/software/contact
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Catalogs and further information



LV 10
Low-Voltage Power Distribution and Electrical Installation Technology
SENTRON • SIVACON • ALPHA
PDF (E86060-K8280-A101-B8-7600)



ET D1
Switches and Socket Outlets
DELTA
PDF (SIEP-C10409-00-7600)



LV 13
3WA Air Circuit Breakers
SENTRON
PDF (E86060-K8280-B101-A2-7600)



SiePortal
Information and Ordering Platform on the Internet:
sieportal.siemens.com



LV 18
Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification
SENTRON
PDF (E86060-K8280-E347-B1-7600)



SITRAIN
Digital Industry Academy
www.siemens.com/sitrain



IC 10
Industrial Controls
SIRIUS
PDF (E86060-K1010-A101-B6-7600)



Siemens TIA Selection Tool
for the selection, configuration and ordering of TIA products and devices
www.siemens.com/tst

The catalogs listed above and additional catalogs are available in PDF format at www.siemens.com/lowvoltage/catalogs

Further information on low-voltage power distribution and electrical installation technology is available on the Internet at www.siemens.com/lowvoltage

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