



## 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.

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.

### Note:

Products bearing our Siemens EcoTech label are identified by this clickable symbol in the catalog:



[www.siemens.com/lowvoltage/SiemensEcoTech](http://www.siemens.com/lowvoltage/SiemensEcoTech)

# 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](http://www.siemens.com/sentron-measuring-devices)

### Your product in detail

The SiePortal platform (knowledge base) provides comprehensive information

[www.siemens.com/lowvoltage/product-support](http://www.siemens.com/lowvoltage/product-support)

- Quick Selection Guide
  - SENTRON components for increased energy efficiency ([109744725](#))
- Brochure
  - SENTRON Powermanager – update and benefit ([109805178](#))

The relevant tender specifications can be found at

[www.siemens.com/tenderspecifications](http://www.siemens.com/tenderspecifications)

### Siemens YouTube channel

- Power monitoring (general) [sie.ag/7N6g4g](http://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](http://sie.ag/2kTH9Lz)
- Digitalization solutions [sie.ag/2olliNi](http://sie.ag/2olliNi)
- Configuring and visualizing for SIMATIC [sie.ag/2kpbwcs](http://sie.ag/2kpbwcs)
- Software and apps [sie.ag/2kTJuF](http://sie.ag/2kTJuF)

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.](http://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](http://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](http://www.siemens.com/lowvoltage/components/contact)

You will find further information on services at

[www.siemens.com/service-offers](http://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](http://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](http://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](http://www.siemens.com/support-app)

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

- SiePortal (product catalog)  
[www.siemens.com/lowvoltage/product-catalog](http://www.siemens.com/lowvoltage/product-catalog)
- Image database  
[www.siemens.com/lowvoltage/picturedb](http://www.siemens.com/lowvoltage/picturedb)

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

[www.siemens.com/cax](http://www.siemens.com/cax)

### Face-to-face or online training

Our training courses can be found at  
[www.siemens.com/sitrain-lowvoltage](http://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 Powerconfig

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

Free download [SENTRON 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](http://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](#))
  - 7KM PAC3120 and 7KM PAC3220 ([109767307](#))
  - SENTRON Powercenter 3000 ([109763838](#))
- System Manual
  - 7KT1261 PAC1200 multichannel current measuring system ([109963296](#))
  - 7KT multichannel current measuring system ([109483442](#))
  - SENTRON power monitoring device PAC4220 ([109823026](#))
  - SENTRON circuit protection devices with communication and measuring function ([109791806](#))
- Communication Manual
  - 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](http://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 10/14

## Measuring devices, circuit breakers and circuit protection devices

### Measuring devices for industrial applications



7KM PAC1020

–

–

7KM PAC2200, PAC2200CLP

■

■<sup>1)</sup>

7KM PAC3200T

■

■

7KM PAC3120

–

■<sup>1)</sup>

7KM PAC3220

■

■

7KM PAC4220

■

■

### 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 1000/1100

–

■

5ST3 COM AS/FC, 5ST3 COM RCA,

5SL6 COM MCB, 5SL6 COM RCM MCB,

5SV6 COM AFDD/MCB, 5SV8 COM RCM,

5TY1 COM ECPD, 5TT4 COM DI/DO,

3NA COM Fuse

SENTRON Powercenter 2000

■

■

### Other Modbus devices

–

–

■ Function available    – Function not available

<sup>1)</sup> Via gateway (PAC4200)

<sup>2)</sup> Incl. module for Desigo CC building management

<sup>3)</sup> Via XML/JSON

<sup>4)</sup> Via SPP2000

<sup>5)</sup> Via Modbus TCP

PC-based		
SENTRON Powerconfig	SENTRON Powermanager <sup>2)</sup>	SENTRON Powercenter 3000
■	-	-
■	■	■
■	■	■
-	■	-
-	■	-
-	-	-
-	■	-
Free of charge	License and trial license	-
Windows X64	Windows X64	-
-	■ (TÜV)	■
-	■	■
-	■	■
from page 10/14	from page 10/18	from page 10/22

World of SIMATIC	
TIA Portal	
SIMATIC TIA Portal integrated	SIMATIC TIA Portal capable
■	-
■	■
■	■
■	-
-	-
-	-
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■	■ <sup>3)</sup>	■
■	■	■
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-	■ <sup>4)</sup>
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-	-
-	-
-	-
-	-
-	■ <sup>5)</sup>
-	-
-	■ <sup>5)</sup>
-	-

# Hardware components

## Industry



7KM PAC1020

7KM PAC2200

7KM PAC2200CLP

7KM PAC3200T

Type of mounting	7KM PAC1020	7KM PAC2200	7KM PAC2200CLP	7KM PAC3200T
Front mounting   DIN rail   Screw mounting	■   -   -	-   ■   -	-   ■   -	-   ■   -
Withdrawable   Fixed-mounted	-   -	-   -	-   -	-   -
<b>Measuring connection</b>				
Direct measurement	-	■	■	-
Transformer measurement	■	■	■	■
Multichannel measuring system	-	-	-	-
<b>Suitable transformers</b>				
Window-type current transformers	■	■	■	■
Folding transformer	■	■	■	■
Integrated transformer	-	-	-	-
<b>Commissioning</b>				
MID version   Load profile (PTB)   PTB firmware update	-   -   -	■   -   -	■   ■   -	-   -   -
Hardware write protection	-	■	■	■
Max. input voltage L-L/L-N	400 V/ 230 V	400 V/ 230 V	400 V/ 230 V	400 V/ 230 V
Transformer connection version	x/1 A or x/5 A			
Direct connection version	-	65 A	65 A	-
DC power supply unit with extra-low voltage version	-	-	-	-
1-phase counter version	-	■	■	-
Electrically isolated voltage inputs	-	-	-	-
Version without display (for web interface)	-	-	-	■
<b>Evaluation</b>				
<b>Measured quantities</b>				
Average value of measured values	-	■	■	■
Voltage, current, frequency	■	■	■	■
Power, power factor	■	■	■	■
<b>Energy measurement</b>				
Daily energy storage	■	> 221 days	> 10 years	> 221 days
Monthly energy storage	■	> 25 months	> 10 years	> 25 months
Yearly energy storage	■	> 7 years	> 10 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	-	-	-	-
<b>Monitoring functions</b>				
Operating hours counter	-	-	-	■
Limit monitoring	-	-	-	■
Logic functions	-	-	-	■
Event log	-	-	-	-
Gateway function	-	-	-	-
Reporting acc. to EN 50160	-	-	-	-
Integrated fault recorder	-	-	-	-
<b>Integrated communications interfaces</b>				
Digital inputs/digital outputs	1/1	1/1	1/1	1/1
S0 interface	■	■	■	■
M-Bus	-	■	-	-
RS485 (Modbus RTU)	■	■	-	-
Ethernet with Modbus TCP	-	■	■	■
BACnet	-	-	-	-
<b>Further information</b>				
	See page 10/32	See page 10/32	See page 10/32	See page 10/32

<sup>1)</sup> From 06/2025 universal power supply unit



# Hardware components

## Buildings and infrastructure



7KT PAC1200

7KT PAC1600

SEM3

	7KT PAC1200	7KT PAC1600	SEM3
<b>Type of mounting</b>			
Front mounting   DIN rail   Screw mounting	-   ■   -	-   ■   -	-   -   ■
Withdrawable   Fixed-mounted	-   -	-   -	-   -
<b>Measuring connection</b>			
Direct measurement	■	■	-
Transformer measurement	■	■	-
Multichannel measuring system	■	-	■
<b>Suitable transformers</b>			
Window-type current transformers	■	■	■
Folding transformer	■	■	■
Integrated transformer	■	-	■
<b>Commissioning</b>			
MID version   PTB-A50.7   PTB firmware update	-   -   -	■   -   -	-   -   -
Max. input voltage L-L/L-N	400 V/230 V	400 V/230 V	480 V/277 V
Transformer connection version	x/5 A	x/5 A	50 ... 1200 A/0.1 A
Direct connection version	40/63 A	63/80 A	-
DC power supply unit with extra-low voltage version	-	-	-
1-phase counter version	■	■	■
Electrically isolated voltage inputs	-	-	-
Version without display (for web interface)	■	-	■
<b>Evaluation</b>			
<b>Measured quantities</b>			
Average value of measured values	-	-	-
Voltage, current, frequency	■	■	■
Power, power factor	■	■	■
<b>Energy measurement</b>			
Daily energy storage	■	-	-
Monthly energy storage	■	-	-
Yearly energy storage	■	-	-
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	-	-	-
<b>Monitoring functions</b>			
Operating hours counter	-	■	-
Limit monitoring	-	■	-
Logic functions	-	-	■
Event log	-	-	■
Gateway function	-	-	-
Reporting acc. to EN 50160	-	-	-
Integrated fault recorder	-	-	-
<b>Integrated communications interfaces</b>			
Digital inputs/digital outputs	-	1/1	2/1
S0 interface	-	■	-
M-Bus	-	■	-
RS485 (Modbus RTU)	-	■	■
Ethernet with Modbus TCP	■	-	■
BACnet	-	-	■
<b>Further information</b>			
	See page 10/37	See page 10/36	See page 10/38

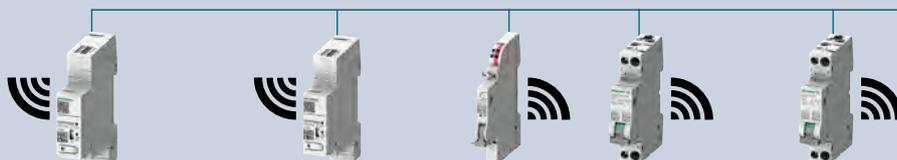
## Circuit breakers



3WA	3WL	3WL10/3VA27	3VA ETU8
- - -	- - -	- - -	- - -
■ ■	■ ■	■ ■	- ■
-	-	-	-
■	■	■	■
-	-	-	-
-	-	-	-
■	■	■	■
- - -	- - -	- - -	- - -
1000 V/577 V integrated	690 V/400 V integrated	690 V/400 V integrated	690 V/400 V integrated
-	-	-	-
24 V DC	24 V DC	24 V DC	24 V DC
-	-	-	-
-	-	-	-
■	■	-	-
■	■	■	■
■	■	■	■
-	-	-	-
-	-	-	-
-	-	-	-
■ ■ ■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■ -	■ ■ ■ ■ ■
■	■	-	■
2nd to 31st	2nd to 29th	-	-
-	-	-	-
■	■	■	■
-	-	-	-
-	■	■	■
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
■	■	■	■
■	-	■	■
-	-	-	-
-	■	■	■
■	■	■	■
-	-	-	-
See page 1/4	See page 1/76	See page 1/76 and page 2/17	See page 2/18

# Hardware components

## Circuit protection devices



	SENTRON Powercenter 1100	SENTRON Powercenter 2000 <b>new</b>	5ST3 COM AS/FC	5SV6 COM AFDD	5SL6 COM MCB EM   RCM/EM
<b>Communications interfaces</b>					
Radio link	■	■	■	■	■
Modbus TCP	■	■	-	-	-
Bluetooth	■	■	-	-	-
Gateway function	■	■	-	-	-
Secure protocol (https)	■	■	-	-	-
Login (role-based)	■	■	-	-	-
Web server	-	■	-	-	-
Cloud (MQTT)	-	■	-	-	-
Compatible with SENTRON Powercenter 1000	-	-	■	■	■
<b>Type of mounting</b>					
DIN rail	■	■	■	■	■
Busbar	-	-	-	-	-
<b>Evaluation</b>					
Switching state	-	-	■	■	■
Temperature	■	■	■	■	■
Current	-	-	-	■	■
Residual current (in various frequency ranges)	-	-	-	-	-   ■
Voltage	-	-	-	■	■
Frequency	-	-	-	■	■
Apparent, reactive and active power, power factor	-	-	-	■	■
Reactive and active energy	-	-	-	■	■
THD	-	-	-	-	■
<b>Monitoring functions</b>					
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	-	-	-	■	-
<b>Switching function</b>					
Remote switching	-	-	-	-	-
RCCB test function	-	-	-	-	-
Digital input/output	-	-	-	-	-
Time delay	-	-	-	-	-
Timing function	-	-	-	-	-
Configuration of protective function	-	-	-	-	-
<b>Further information</b>					
	See page 10/28	See page 10/26	See page 3/58 and 4/68	See page 4/58	See page 3/42

<sup>1)</sup> Protection function provided, but tripping is not communicated



# Accessories

## Communication modules



		7KM Switched Ethernet PROFINET/Modbus TCP	7KM PROFIBUS DP	7KM RS485 Modbus RTU	SETRON PROFINET Proxy SPP2000
<b>Industry</b>					
	7KM PAC1020	-	-	-	-
	7KM PAC2200	-	-	-	■
	7KM PAC2200CLP	-	-	-	■
	7KM PAC3200T	-	-	-	■
	7KM PAC3120/ 7KM PAC3120 MID	-	-	-	-
	7KM PAC3220/ 7KM PAC3220 MID	■	■	■	-
	7KM PAC4220	■	■	■	-
<b>Buildings and infrastructure</b>					
	7KT PAC1200	-	-	-	-
	7KT PAC1600	-	-	-	-
	SEM3	-	-	-	-
<b>Circuit breakers</b>					
	3WA/3WL	-	-	-	-
	3WL10/3VA27	-	-	-	-
	3VA ETU5/8	■	■	■	-

<sup>1)</sup> Current transformers must be used for rated operational currents above 63 A

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
-	-	■	■	■
-	-	■	■	■
-	-	-	-	■
-	-	■	■	■
-	-	■	■	■
■	■	■	■	■
■	■	■	■	■
-	-	■ <sup>1)</sup>	■ <sup>1)</sup>	■ <sup>1)</sup>
-	-	■	■	■
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

# SENTRON Powerconfig

## Configuration software for commissioning and maintenance

Free download [SENTRON Powerconfig](#)

You will find further information on the internet at

[www.siemens.com/sentron](http://www.siemens.com/sentron)

Free download SENTRON Powerconfig mobile via:

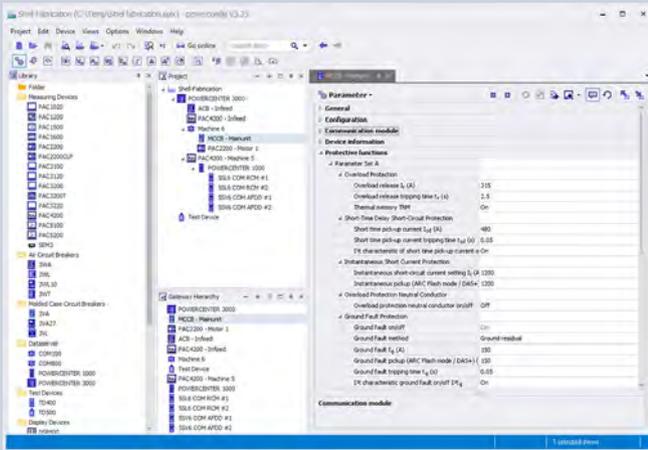


[App Store](#)

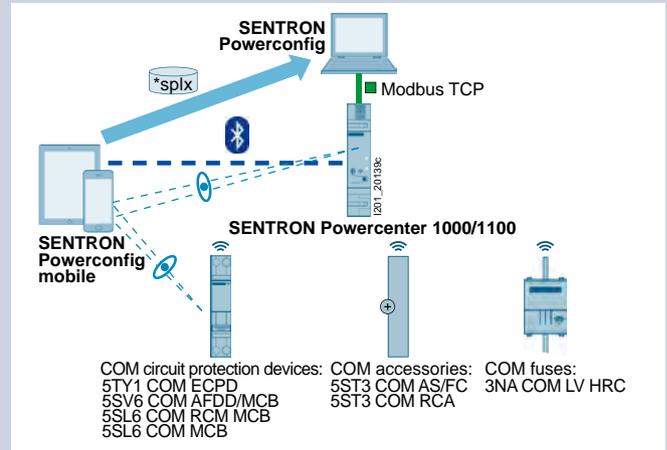


[Play Store](#)

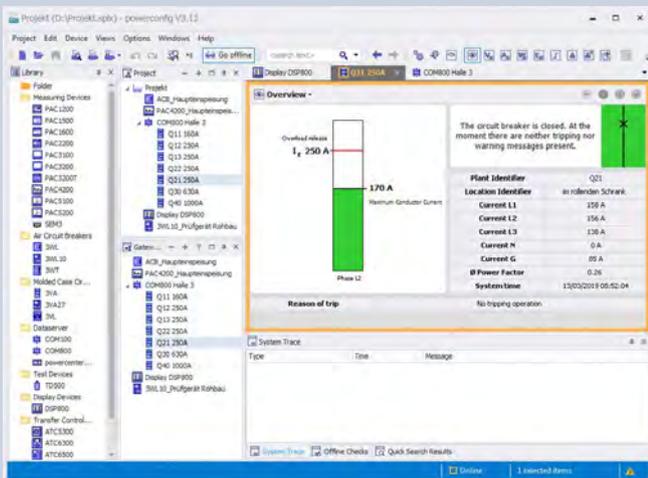
- Software tool for the efficient commissioning and diagnostics of communication-capable SENTRON components
- Supports all electronic SENTRON devices, e.g. 3WA, 3WL, 3VA, SENTRON Powercenter 3000 and SENTRON Powercenter 1000, with 5ST3 AS+FC COM, 5ST3 RCA COM, 5SL6 MCB COM, 5SV6 AFDD COM and 3NA Fuse 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



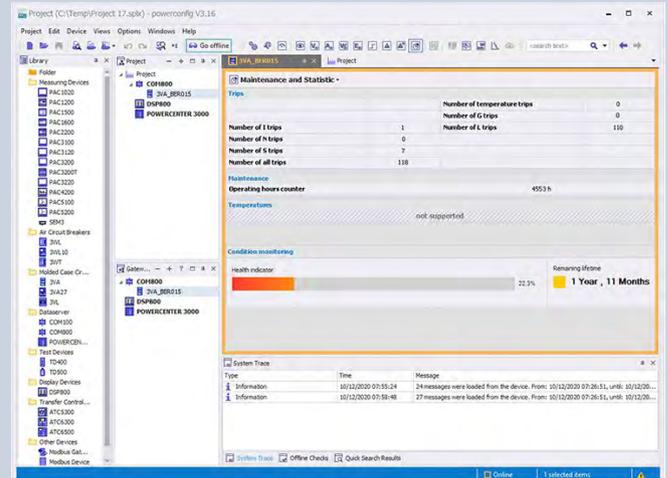
Setting of parameter values



Scanning of circuit protection devices



Display of the circuit breaker status



Display of the state of health of the 3VA

10

# SENTRON Powermanager

## PC-based power monitoring software



### SENTRON Powermanager

SENTRON Powermanager is the power monitoring software for Smart Infrastructure. Together with the latest protection/switching devices and measuring instruments from the SENTRON portfolio, SENTRON Powermanager increases the energy transparency and availability of your energy infrastructure in the building, in the plant or in your factory. This contributes significantly to improving your energy efficiency in accordance with national and international norms and standards. SENTRON Powermanager supports all media (water, compressed air, gas, electrical power, etc.) and can integrate devices with various protocols (Modbus, BACnet, IEC 61850) and visualize them in ready-made or user-specific dashboards. In addition, SENTRON Powermanager offers alarm and event management, predefined and freely configurable reporting systems and an optional graphics editor for dedicated workflows and views.

SENTRON Powermanager is based on the Desigo CC building management system and is also available as an expansion module.

You can find the latest download of the standalone power monitoring software and change information at [www.siemens.com/lowvoltage/product-support](http://www.siemens.com/lowvoltage/product-support) (109771760)

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

You will find further information on the internet at [www.siemens.com/powermanager](http://www.siemens.com/powermanager)

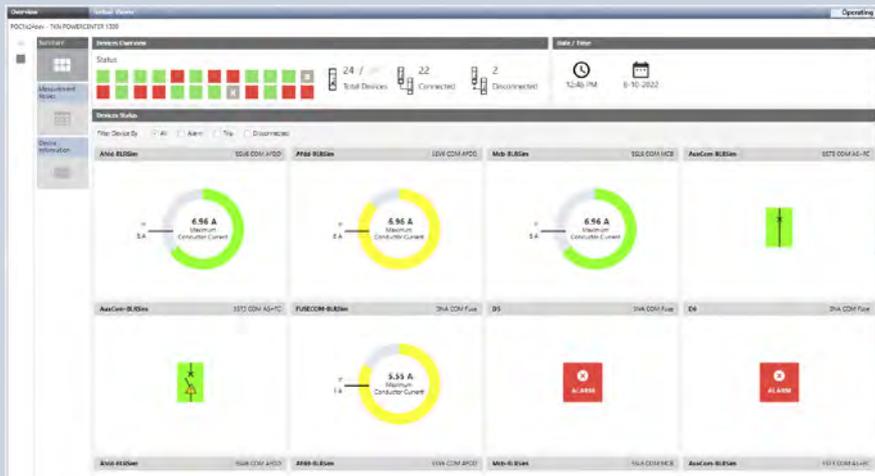
You will find training courses on the internet at [www.siemens.com/sitrain-lowvoltage](http://www.siemens.com/sitrain-lowvoltage)



SENTRON Powermanager – measuring device diagram



Health Dashboard



SENTRON Powercenter 1000 Dashboard

# SENTRON Powermanager

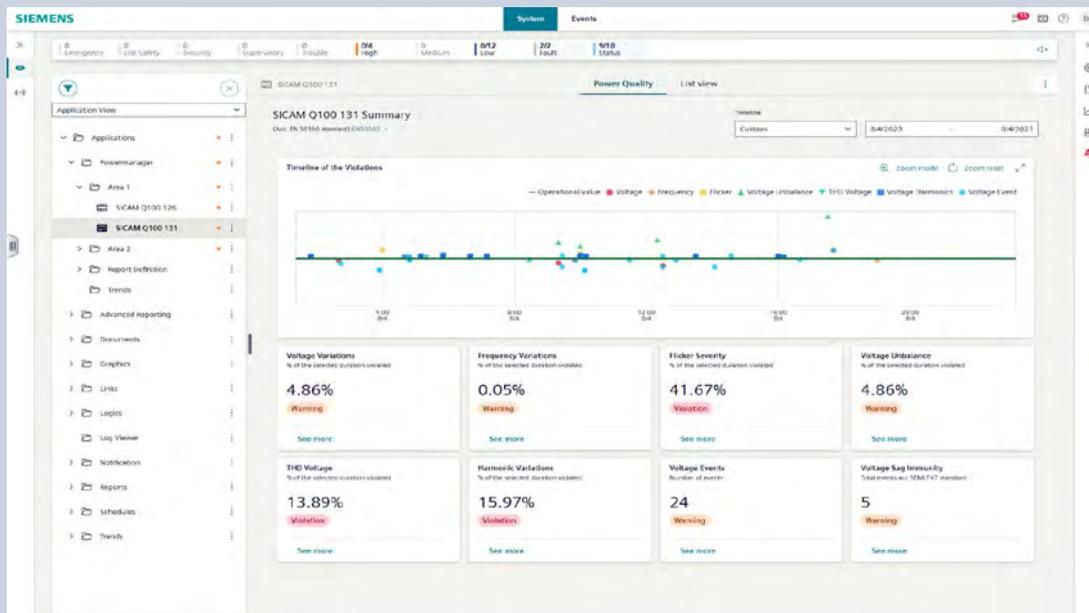
PC-based power monitoring software



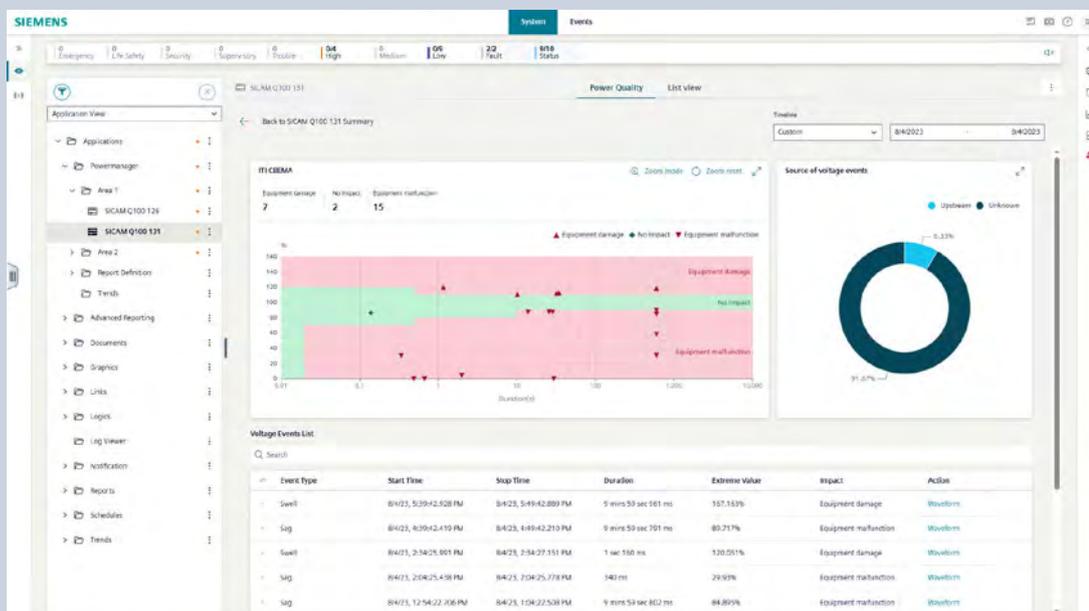
## SENTRON Powermanager PQ Advisor

The Power Quality Advisor in the SENTERON Powermanager enables the automatic evaluation and archiving of power quality information from the SICAM Q100 and Q200 devices in the SENTERON Powermanager. Dashboards and reports in accordance with EN 50160 as well as higher-level area and system dashboards make it easier to localize power quality events.

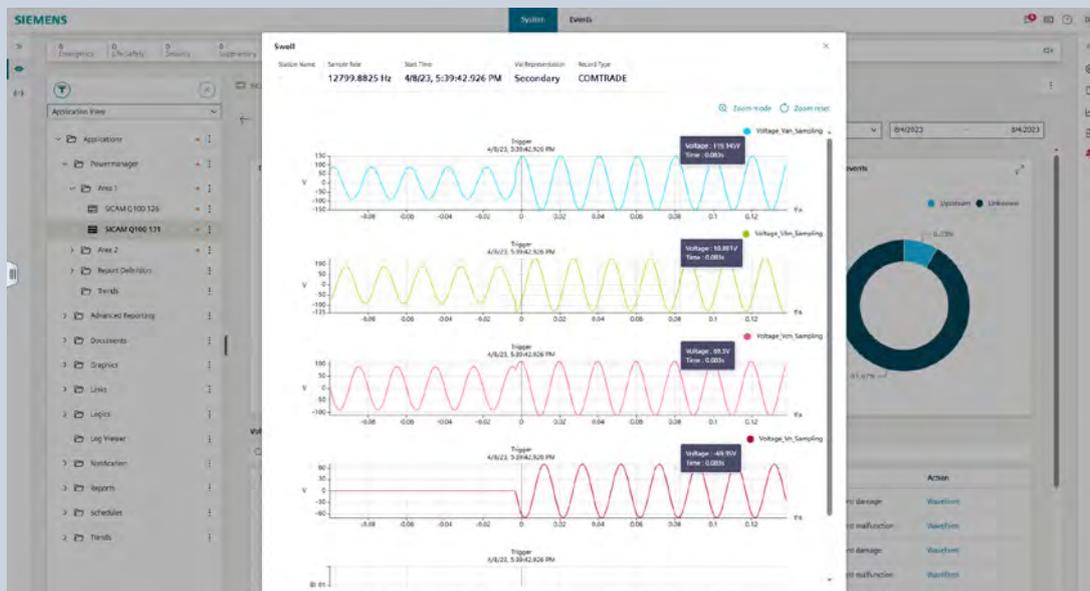
The integrated and dedicated assessment of the waveform enables a detailed evaluation of the cause of the power quality event.



PQ overview – all events at a glance according to EN 50160



Interpretation of the voltage events and their effects using the ITIC diagram



Voltage events – detailed voltage curve for detailed evaluation

# SENTRON Powermanager

## PC-based power monitoring software



Version	Description	Article No.
<b>SENTRON Powermanager</b>		
Extended Package	Full product license for up to 10 devices (including 2 clients), installation for client/server, web access via Windows App Client	7KN2710-2CE40-0YC0
Trial license	Full product license limited to 60 days for up to 10 devices, incl. all functions; software download via SIOS Portal <a href="http://www.siemens.com/lowvoltage/product-support">www.siemens.com/lowvoltage/product-support (109771760)</a> A free license for one-time use (trial license limited to 60 days) must also be requested via <a href="http://www.siemens.com/sentron-powermanager-trialversion">www.siemens.com/sentron-powermanager-trialversion</a>	
<b>Device expansions</b>		
Device Pack (20)	Device expansion license for up to 20 devices	7KN2711-1CE40-0YC0
Device Pack (50)	Device expansion license for up to 50 devices	7KN2711-2CE40-0YC0
Device Pack (100)	Device expansion license for up to 100 devices	7KN2711-3CE40-0YC0
Device Pack (200)	Device expansion license for up to 200 devices	7KN2711-4CE40-0YC0
Device Pack (500)	Device expansion license for up to 500 devices	7KN2711-5CE40-0YC0
Device Pack (1000)	Device expansion license for up to 1000 devices	7KN2711-6CE40-0YC0
<b>Option packs</b>		
"Graphics Editor 60 Days" option pack	Option for creating any number of freely configured graphics, validity period limited to 60 days	7KN2712-0CE40-0YC0
"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	7KN2712-1CE40-0YC0
"Client (5)" option pack	Expansion for up to 5 clients	7KN2712-2CE40-0YC0
"SENTRON Powermanager OPC UA/DA Client (100)" option pack	100 data points for OPC client configuration	7KN2712-3CE40-0YC0
"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.	7KN2712-4CE40-0YC0
"SENTRON logics" option pack	Extended logic function for status or event-based response	7KN2712-6CE40-0YC0
SENTRON Powermanager SUR-Unit	Update – Extend subscription period by 12 months	7KN2713-7CE40-0YC0
SENTRON Powermanager SUS-Unit	Update – Start new 12-month subscription period	7KN2713-8CE40-0YC0
"SENTRON Powermanager BACnet protocol" option pack	Creating, evaluating and managing devices with BACnet communication in SENTRON Powermanager	7KN2712-3CE40-1YC0
"SENTRON Powermanager IEC 61850 protocol" option pack	Creating, evaluating and managing devices with IEC 61850 communication in SENTRON Powermanager	7KN2712-3CE40-1YC1
"SENTRON Powermanager PQ Advisor" option pack	Power Quality Advisor extension requires IEC 61850 protocol. Evaluation and archiving of power quality information from SICAM Q100/Q200 in EN 50160 dashboards and reports.	7KN2712-5CE40-0YC0
<b>System packages</b>		
System 3	Package comprising 1 × SENTRON Powermanager Extended 3 × PAC3220	7KN2715-3CE40-0YC0
System 5	Package comprising 1 × SENTRON Powermanager Extended 5 × PAC2200 transformer measurement Modbus TCP	7KN2715-5CE40-0YC0



# 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 Siemens Xcelerator (e.g. Building X, Electrification X)
  - 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](http://www.siemens.com/sentron-powercenter3000)

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Version	Description	Article No.
SENTRON Powercenter 3000	Basic – The SENTRON Powercenter 3000 product, incl. handling of up to 32 devices	7KN1310-0MC00-0AA8
SENTRON Powercenter 3000 device expansion (10)	License for an additional 10 devices <sup>1)</sup>	7KN1300-1AA00-0YAO
SENTRON Powercenter 3000 device expansion (20)	License for an additional 20 devices <sup>1)</sup>	7KN1300-2AA00-0YAO
SENTRON Powercenter 3000 device expansion (50)	License for an additional 50 devices <sup>1)</sup>	7KN1300-3AA00-0YAO
SENTRON Powercenter 3000 device expansion (100)	License for an additional 100 devices <sup>1)</sup>	7KN1300-4AA00-0YAO

<sup>1)</sup> Please note that each "device expansion" license can only be executed once on a SENTRON Powercenter 3000. You can add each "device expansion" license type once to your SENTRON Powercenter 3000, which increases the number of devices to a total number of 212 (32 Basic plus 180 via additional licenses).

#### Note:

Certified energy data management system for use with EN ISO 50001:

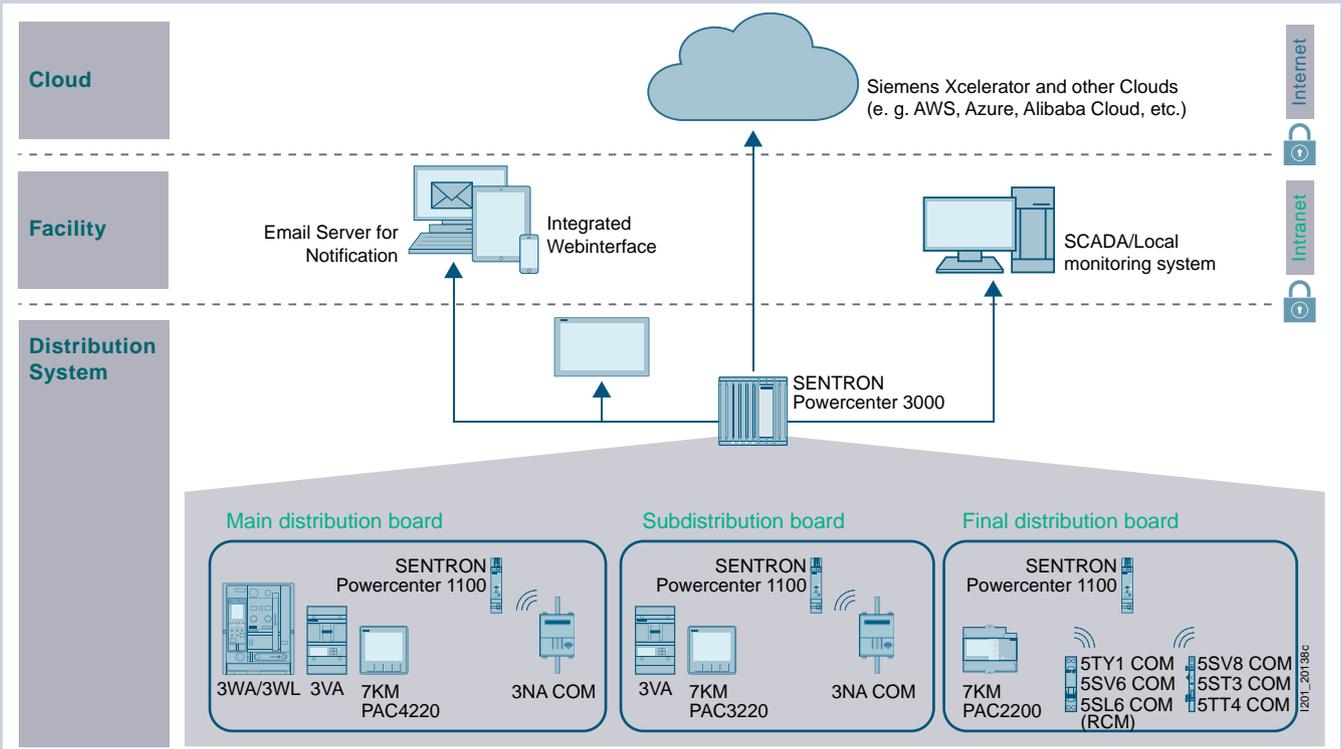
[www.siemens.com/lowvoltage/produkt-support\(109976080\)](http://www.siemens.com/lowvoltage/produkt-support(109976080))

**SENTRON Powercenter 3000**

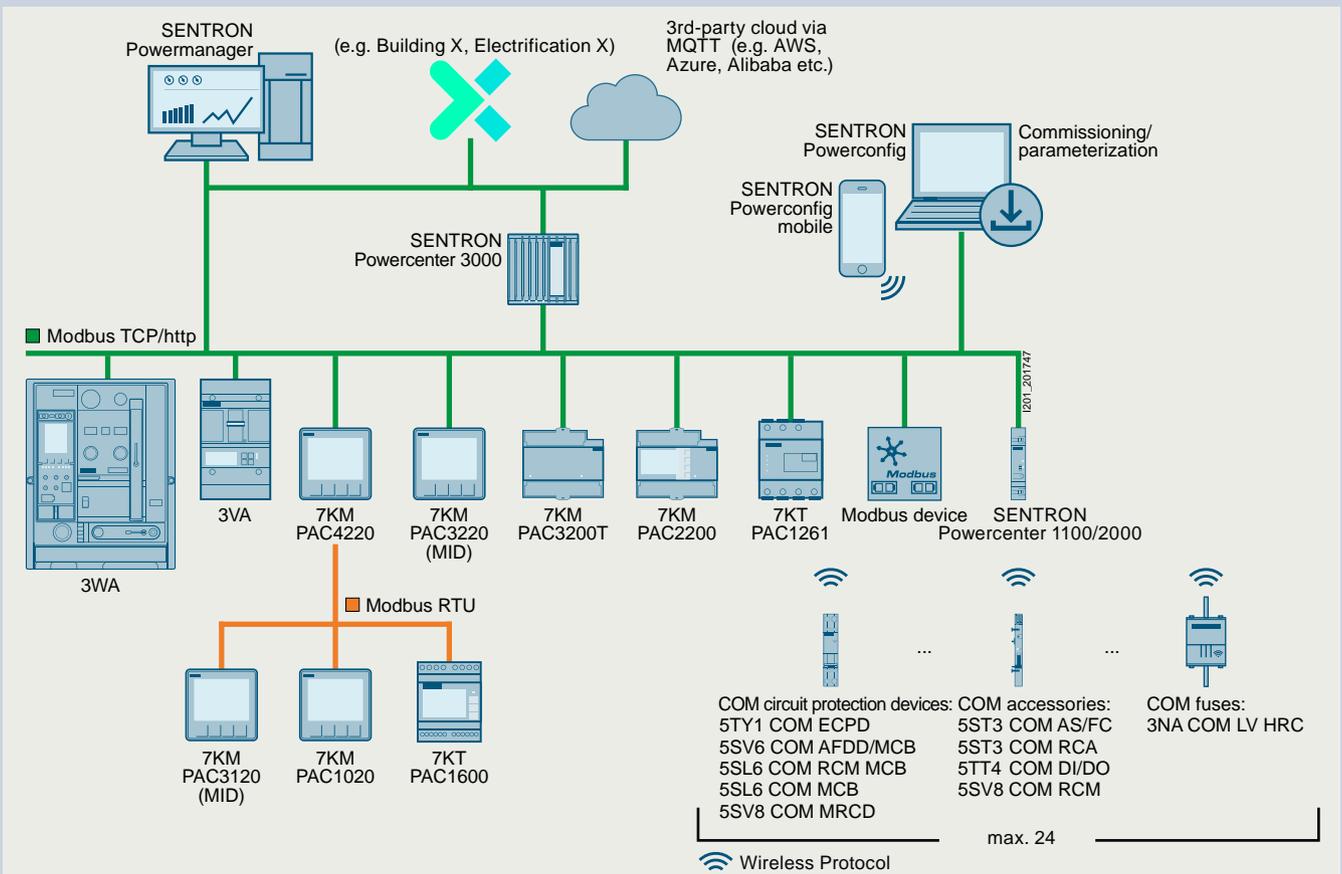
ISO 50001

TÜV certified energy data management system

SENTRON Powercenter 3000



Areas of use and applications for SENTRON Powercenter 3000



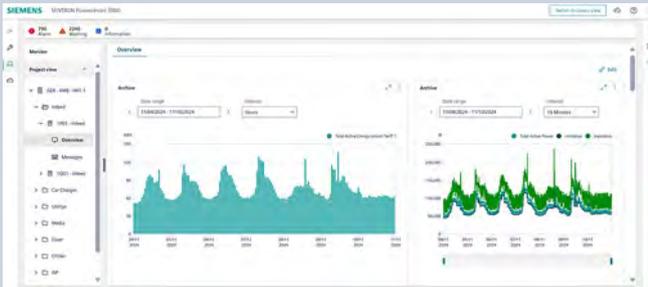
# SENTRON Powercenter

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

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.

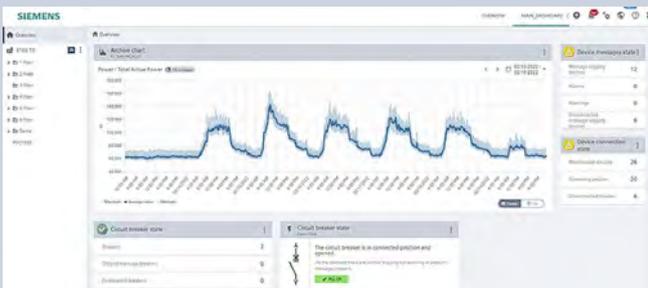


#### Information on the status of protection and switching devices

- 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

### 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

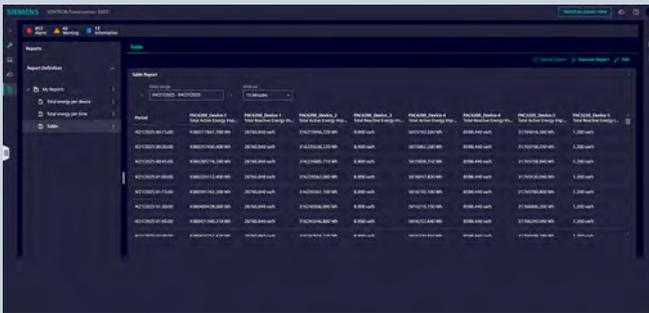
### Easy-to-operate user interface

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

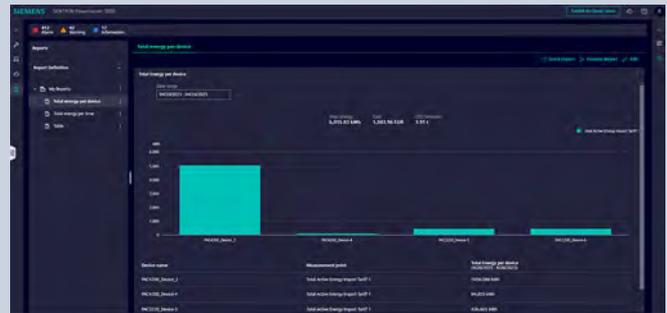
## Reporting

Version V1.10 substantially expands the reporting functionality. Reports can be created manually or automatically. Manually created reports are available for download, automatically created reports can be sent via e-mail or saved on an SFTP server. Reports can be created in Excel or PDF file format.



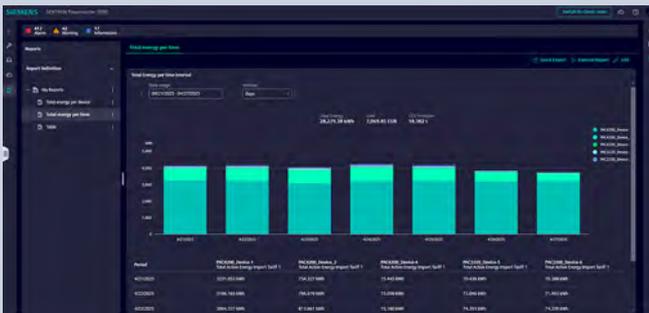
### Table report

- The table report can be used to present all available metering values for any time range at a desired interval as a table
- Measuring instruments and measuring points can be added individually to the report templates



### Total energy per device

- This report shows the energy consumption of each load, both as a graphic and as a table, for the selected time range
- All available energy values can be added to the report template



### Total energy per time interval

- This report shows the energy consumption of each load, both as a graphic and as a table, for the selected time range and interval
- All available energy values can be added to the report template

# SENTRON Powercenter

## Data acquisition and visualization in the final circuit directly to the cloud

### SENTRON Powercenter 2000 **new**

The SENTRON Powercenter 2000 data transceiver is designed to enable comprehensive data acquisition of communication and measuring-capable SENTRON COM circuit protection devices. This increases transparency in the final circuit, through which optimization measures can be derived to increase system availability.

The measured values of the 24 subordinate circuit protection devices can be easily visualized via the web server. Via the integrated cloud connection, the data is transferred directly to customer-specific cloud solutions without any additional gateway. This ensures location-independent availability, as well as active alerting in the event of an error and long-term storage of historical measured values.

As for the Powercenter 1100, only radio-capable circuit protection devices are connected. The compact design allows for the greatest possible space savings for a cloud gateway.

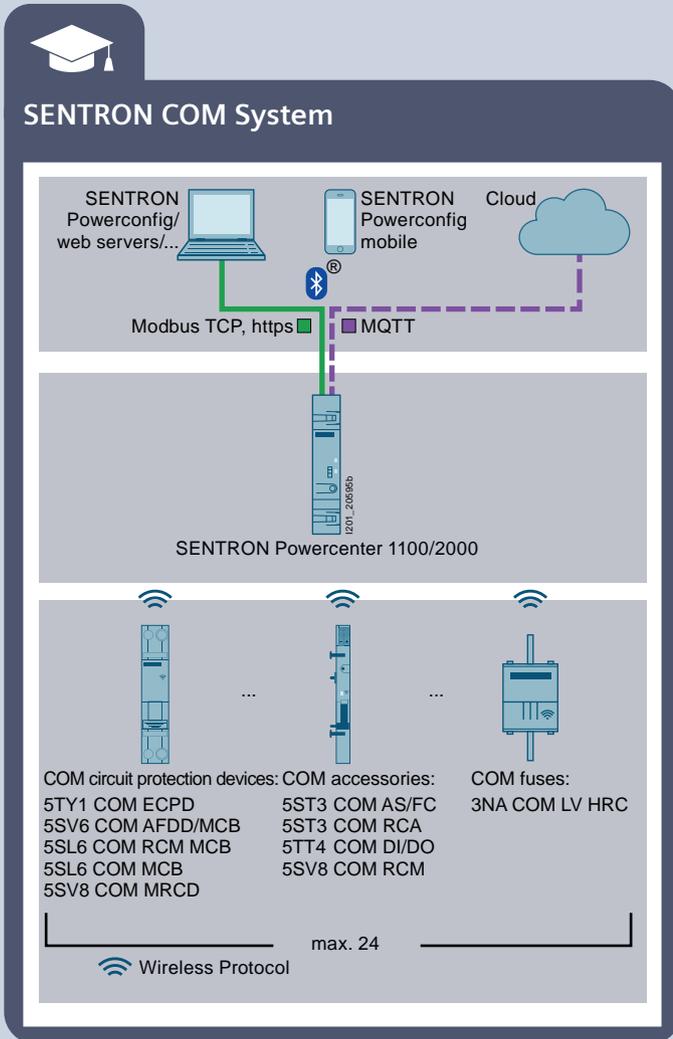
The Powercenter 2000 is subject to the highest possible cybersecurity requirements via secure protocols (https, MQTT) and limited access rights using a login and password. All unused protocols (e.g. Bluetooth or Modbus TCP) can be deactivated.

Size	Power supply	Other interfaces	Subordinate devices (radio)	Article No.
1 TE	24 V DC SELV	2 × Ethernet (https/Modbus TCP/MQTT) web server, Bluetooth	24	7KN1210-0MC00

**Note:**

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

For more information, refer to the System Manual – Circuit protection devices with communication and measuring function (109791806)



Web server device overview

# SENTRON Powercenter

## Wireless data acquisition and visualization in the final circuit

### SENTRON Powercenter 1100

The SENTRON Powercenter 1100 data transceiver is designed to enable comprehensive data acquisition of communication and measuring-capable SENTRON COM circuit protection devices. This increases transparency in the final circuit, through which optimization measures can be derived to increase system availability.

Up to 24 (or 64) devices can communicate wirelessly with SENTRON Powercenter 1100 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 1100, 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 device also features two Ethernet ports that provide a switch function.

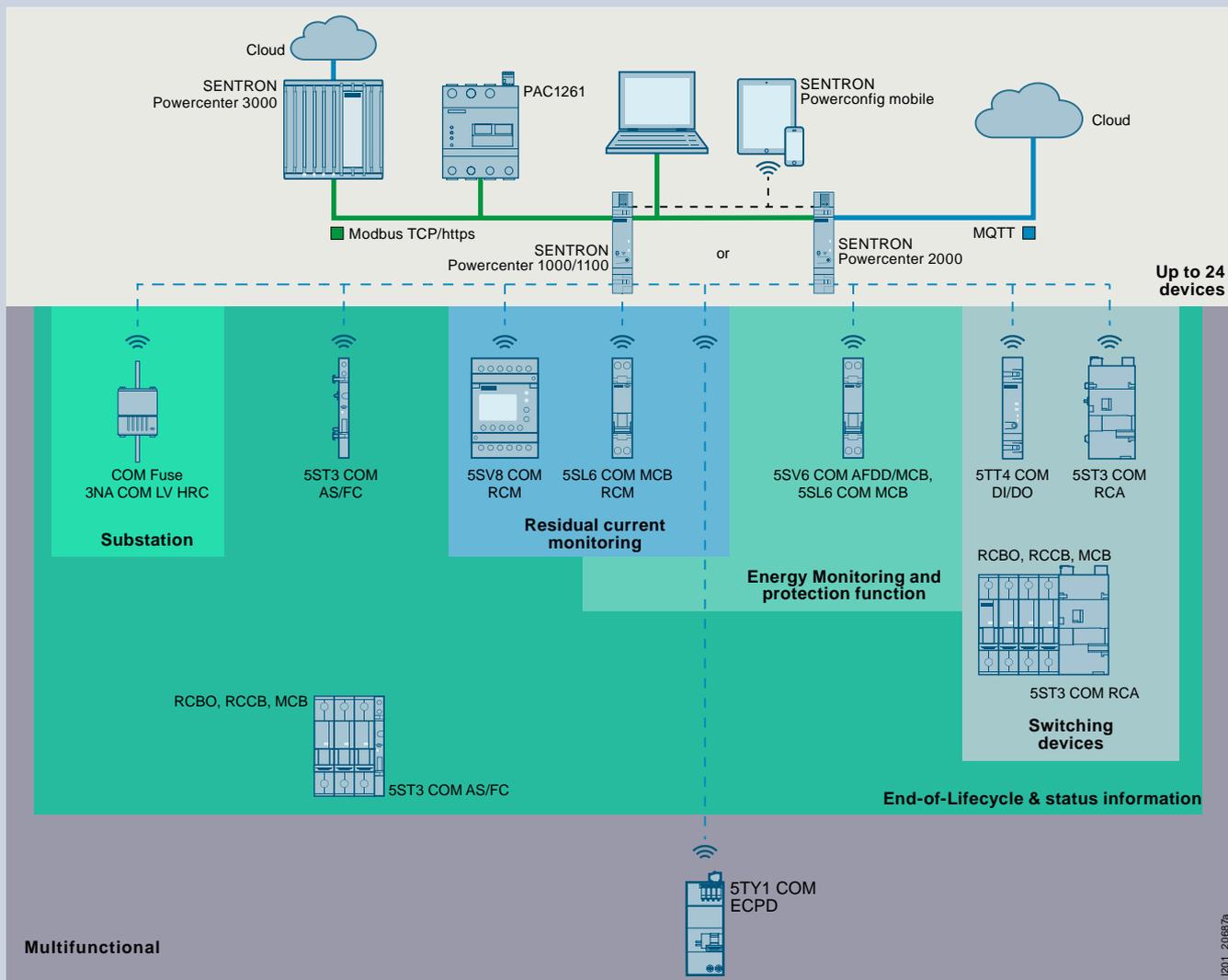
The integrated Bluetooth interface enables simple on-site communication and commissioning via the SENTRON Powerconfig mobile app. With the REST API via https, which is integrated by default, and the access authorization of various roles via login and password, the power center is well protected in terms of cybersecurity. Moreover, communication via the Modbus TCP interface can still be activated so that a further option for connection to various configuration or energy monitoring systems, even customer-specific systems, can be ensured.

Version	Power supply	Other interfaces	Subordinate devices (radio)	Article No.
SENTRON Powercenter 1000	24 V DC SELV	1 × Ethernet (Modbus TCP) Bluetooth	24 (up to firmware V4.0)	7KN1110-0MC00
SENTRON Powercenter 1100	24 V DC SELV	2 × Ethernet (Modbus TCP/https) Bluetooth	24	7KN1111-0MC00

#### Note:

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

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



Application areas and system topology with SENTRON Powercenter 1000/1100/2000



### SENTRON Powercenter 1100/2000 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](http://www.siemens.com/lowvoltage/manuals)

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

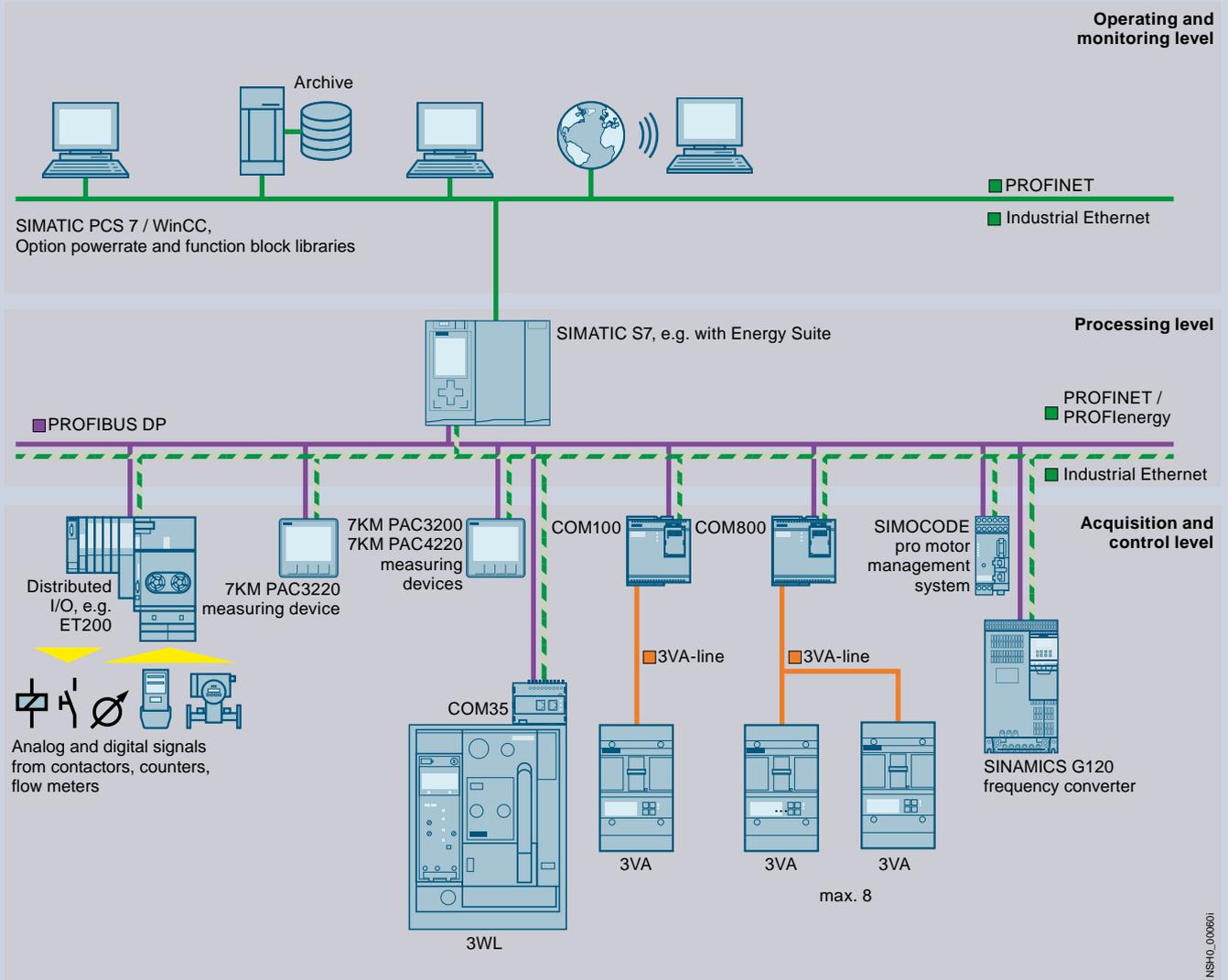
System Manual – Circuit protection devices with communication and measuring function (109791806)



# PAC/3WL/3VA SIMATIC PCS 7 library

For 7KM PAC3200/3220/4200/4220 measuring devices and 3WL/3VA/3VL circuit breakers

Use	Version	Type of delivery	Article No.
<b>PAC/3WL/3VA SIMATIC PCS 7 library</b>			
<ul style="list-style-type: none"> <li>AS blocks and faceplates for integrating the 3WL/3VA/3VL circuit breakers into SIMATIC PCS 7, V8.x, V9.0 SP2 or V9.1</li> <li>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"> <li>Engineering license for one SIMATIC PCS 7 Operator Station of the single station/server version</li> <li>Runtime license for one automation system (1 required per automation system, further AS runtime licenses can be ordered separately)</li> </ul> </li> </ul>	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
<b>AS runtime license for PAC/3WL/3VA library for SIMATIC PCS 7</b>			
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	7KM PAC1020	7KM PAC2200/ PAC2200CLP	7KM PAC3200T
<b>Transformer measurement</b>								
Screw terminals	Self-powered	With	M-Bus	With	Without	–	7KM2200-2EA30-1GA1	–
				Without	Without	–	7KM2200-2EA30-1CA1	–
			Modbus RTU	With	Without	–	7KM2200-2EA30-1HA1	–
				Without	Without	–	7KM2200-2EA30-1DA1	–
			Modbus TCP	With	With (FW update)	–	–	–
				With (load profile)	With (FW update)	–	7KM2200-2EA00-1JB1	–
	AC/DC wide-range power supply unit	With	Modbus RTU	Without	Without	7KM1020-0BA01-1DA0	–	–
				Without	Without	–	–	–
				Without	Without	–	–	–
		Without	Modbus TCP	Without	Without	–	–	7KM3200-OCA01-1AA0
				Without	Without	–	–	–
				Without	Without	–	–	–
DC power supply unit with extra-low voltage	With	Modbus TCP	Without	Without	–	–	–	
			Without	Without	–	–	–	
Ring cable lug connection	AC/DC wide-range power supply unit	With	Modbus TCP	Without	Without	–	–	–
<b>Direct measurement</b>								
Screw terminals	Self-powered	With	M-Bus	With	Without	–	7KM2200-2EA40-1GA1	–
				Without	Without	–	7KM2200-2EA40-1CA1	–
			Modbus RTU	With	Without	–	7KM2200-2EA40-1HA1	–
				Without	Without	–	7KM2200-2EA40-1DA1	–
			Modbus TCP	With	With (load profile)	–	7KM2200-2EA40-1JB1	–
				Without	Without	–	7KM2200-2EA40-1JA1	–
			Without	Without	–	7KM2200-2EA40-1EA1	–	

## Further technical specifications

Further technical specifications	7KM1020-..	7KM2200-..	7KM3200-..	7KM3120-0..	7KM3120-1..	7KM3120-2..	
<b>Basic data</b>							
Installation	Front mounting	DIN rail		Front mounting			
Mounting width	–	6 MV		–			
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%	–	100 ... 250 V ±10%
	DC	110 ... 250 V ±10%	–	110 ... 275 V	110 ... 250 V ±10%	24 ... 60 V ±20%	–
<b>Measuring inputs</b>							
Transformer connection	Secondary input current $I_e$		x/1 A or x/5 A				
Direct connection	Input voltage $U_e$ 3 50/60 Hz AC		400/230 V		690/400 V		400/230 V
	Rated current $I_n$		–	65 A	–		–

<sup>1)</sup> Additional AC/DC wide-range power supply as an auxiliary power supply

<sup>2)</sup> From 06/2025 universal power supply unit

<sup>3)</sup> Without binary modules



# 7KM PAC measuring devices



## Accessories

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

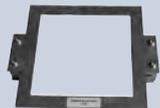
### 7KM PAC TMP2 DIN-rail adapter



- 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 PAC1020/3100/3120/3200/3220/4220
- 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 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
  - 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 (4 ×)

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

<sup>1)</sup> Suitable for 7KM PAC4220 (especially for the Modbus TCP/RTU Gateway)

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

# 7KT PAC measuring devices

## PAC1600 basic unit



Connections	Version	Power supply	Display	Interface	MID	7KT PAC1600	
<b>Transformer measurement</b>							
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	
	<b>Direct measurement</b>						
	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	Without	7KT1665	
					With	7KT1666	
				M-Bus	Without	7KT1667	
					With	7KT1668	
				SO interface	Without	7KT1670	
					With	7KT1671	

## PAC1200 multichannel current measuring system, data manager

With the new 7KT1261 data manager, systems such as the POC1000/1100 can also be connected and visualized with the communicative circuit protection devices, and their measurement data can be stored and evaluated. In addition, the data manager supports the connection and charging control of the VersiCharge wallbox.



Connections	Version	Power supply	Display	Interface	MID	7KT PAC1200
<b>Direct measurement</b>						
Screw terminals	3-phase	Self-powered	Without	Modbus TCP	Without	7KT1261

### PAC1200

7KT PAC1200

#### Sensor bars

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

#### Sensors

	Current $I_e$	Article No.
	63 A	7KT1255

#### Sensors multipack **new**

	Current $I_e$	Sensors	Article No.
	63 A	24 × sensors 63 A 7KT1255	7KT1247
		48 × sensors 63 A 7KT1255	7KT1248

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## PAC1200 bundles



Data manager	Sensor bars	Sensors	18 bundle	24 bundle
1 × data manager 7KT1261	2 × 9-sensor bar 7KT1238	18 × sensors 63 A 7KT1255	7KT1224	–
	2 × 12-sensor bar 7KT1242	24 × sensors 63 A 7KT1255	–	7KT1225

# SEM3 multichannel current measuring system

## Data manager



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

## Further technical specifications

SEM3

<b>Basic data</b>	
Installation	Screw mounting
<b>Measuring inputs</b>	
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			
	<ul style="list-style-type: none"> <li>For recording measured values</li> <li>No configuration necessary for modules</li> <li>Connection of a temperature sensor</li> <li>Metering module is plugged into meter rack</li> </ul>	<b>Article No.</b> 7KT1281-1AA00	
Meter racks			
	<b>Version</b>	<b>Article No.</b>	
	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			
	<ul style="list-style-type: none"> <li>600 V insulated special cable for connecting meter racks to the data manager</li> </ul>		
	<b>Length</b>	<b>Article No.</b>	
	0.3 m	US2:SEM3CAB12INCH	
	0.6 m	US2:SEM3CAB24INCH	
	0.9 m	US2:SEM3CAB36INCH	
Temperature sensors			
	<ul style="list-style-type: none"> <li>Standard connection cable, brown and yellow, 3 m long</li> <li>Can be extended up to 15 m while still maintaining accuracy</li> <li>Configuration is carried out in the data manager</li> </ul>		
	<b>Version</b>	<b>Size</b>	<b>Article No.</b>
	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	–
<b>Time counter</b>						
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
<b>Pulse counter</b>						
0000000	Without	–	12 ... 24 V DC	–	–	7KT5811
		50/60 Hz	24 V AC	–	–	7KT5812
			230 V AC	–	–	7KT5814

### Further technical specifications

	7KT55..	7KT56..	7KT58..
<b>Basic data</b>			
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..
<b>Cover</b>			
Size	Article No.	Article No.	Article No.
55 × 55 mm	7KT9020	–	–
<b>Sealing ring for cover</b>			
Degree of protection	Scope of supply	Article No.	Article No.
IP43 (in control panels with smooth surfaces)	1 set = 5 units	7KT9000	–
<b>Terminal cover</b>			
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 $U_c$	
<b>Time counter</b>				
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
<b>Pulse counter</b>				
0000000	Electrical and mechanical	50/60 Hz	24 ... 240 V AC, 12 ... 150 V DC	7KT5833

### Further technical specifications

7KT58..

<b>Basic data</b>	
Installation	DIN-rail mounting
Mounting width	2 MW
Display	LCD display

# Current transformers

## Bushing-type current transformers for measurement purposes



Size	Internal diameter	Rated primary current $I_{pr}$	Rated power $P_n$	Secondary rated current $I_{sr}$				
				5 A	1 A	5 A	5 A	1 A
<b>Accuracy class 0.2s</b>								
1	19 mm	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	26 mm	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	–	–	–	–
<b>Accuracy class 0.5</b>								
1	19 mm	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	28 mm	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	36 mm	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	41 mm	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	–	–	–	–
<b>Accuracy class 0.5 calibrated</b>								
–	14 mm	100 A	1.5 VA	–	–	–	3NJ6920-3BD23	3NJ6920-3BD13
		150 A	2.5 VA	–	–	–	3NJ6920-3BE23	3NJ6920-3BE13
–	15 mm	200 A	2.5 VA	–	–	–	–	3NJ6930-3BF13
		200 A	2.5 VA	–	–	–	3NJ6930-3BF23	–
		250 A	2.5 VA	–	–	–	–	3NJ6930-3BG13
–	25 mm	250 A	2.5 VA	–	–	–	3NJ6930-3BG23	–
		300 A	5 VA	–	–	–	3NJ6940-3BH23	3NJ6940-3BH13
–	32 mm	400 A	5 VA	–	–	–	3NJ6940-3BJ23	3NJ6940-3BJ13
		500 A	5 VA	–	–	–	3NJ6940-3BK23	3NJ6940-3BK13
		500 A	5 VA	–	–	–	3NJ6940-3BL23	3NJ6940-3BL13
		600 A	5 VA	–	–	–	–	–

<sup>1)</sup> Overcurrent limiting factor F55

**Note:**

Maximum voltage for equipment (rms value)  $U_m = 720$  V



Size	Internal diameter	Rated primary current $I_{pr}$	Rated power $P_n$	Secondary rated current $I_{sr}$				
				5 A	1 A	5 A	5 A	1 A
<b>Accuracy class 1.0</b>								
1	19 mm	50 A	1.2 VA	4NC5112-2CB21	4NC5112-0CB21	–	–	–
		60 A	1.2 VA	4NC5113-2CB21	4NC5113-0CB21	–	–	–
	13 mm	60 A	1.25 VA	–	–	7KT1200	–	–
		19 mm	75 A	2.5 VA	4NC5115-2CC21	4NC5115-0CC21	–	–
	13 mm	100 A	2.5 VA	4NC5117-2CC21	4NC5117-0CC21	–	–	–
		19 mm	100 A	2.5 VA	–	–	7KT1200	–
	13 mm	150 A	2.5 VA	4NC5121-2CC21	4NC5121-0CC21	–	–	–
		19 mm	150 A	3.75 VA	–	–	7KT1202	–
	19 mm	200 A	5 VA	4NC5122-2CE21	4NC5122-0CE21	–	–	–
		250 A	5 VA	4NC5123-2CE21	4NC5123-0CE21	–	–	–
2	28 mm	200 A	5 VA	4NC5222-2CE21	4NC5222-0CE21	–	–	–
		250 A	5 VA	4NC5223-2CE21	4NC5223-0CE21	–	–	–
		300 A	5 VA	4NC5224-2CE21	4NC5224-0CE21	–	–	–
		400 A	5 VA	4NC5225-2CE21	4NC5225-0CE21	–	–	–
3	36 mm	400 A	5 VA	4NC5325-2CE21	4NC5325-0CE21	–	–	–
		500 A	5 VA	4NC5326-2CE21	4NC5326-0CE21	–	–	–
		600 A	5 VA	4NC5327-2CE21	4NC5327-0CE21	–	–	–
		750 A	5 VA	4NC5330-2CE21	4NC5330-0CE21	–	–	–
4	41 mm	800 A	10 VA	4NC5431-2CH21	4NC5431-0CH21	–	–	–
		1000 A	10 VA	4NC5432-2CH21	4NC5432-0CH21	–	–	–
		1250 A	10 VA	4NC5434-2CH21	4NC5434-0CH21	–	–	–
		1500 A	10 VA	4NC5435-2CH21	4NC5435-0CH21	–	–	–
		2000 A	12.5 VA	4NC5438-2CJ21	4NC5438-0CJ21	–	–	–
		2500 A	12.5 VA	4NC5440-2CJ21	4NC5440-0CJ21	–	–	–
		3000 A	30 VA	4NC5441-2CN21	–	–	–	–

<sup>1)</sup> Overcurrent limiting factor FS5

**Note:**

Maximum voltage for equipment (rms value)  $U_m = 720$  V

**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	–	–	–