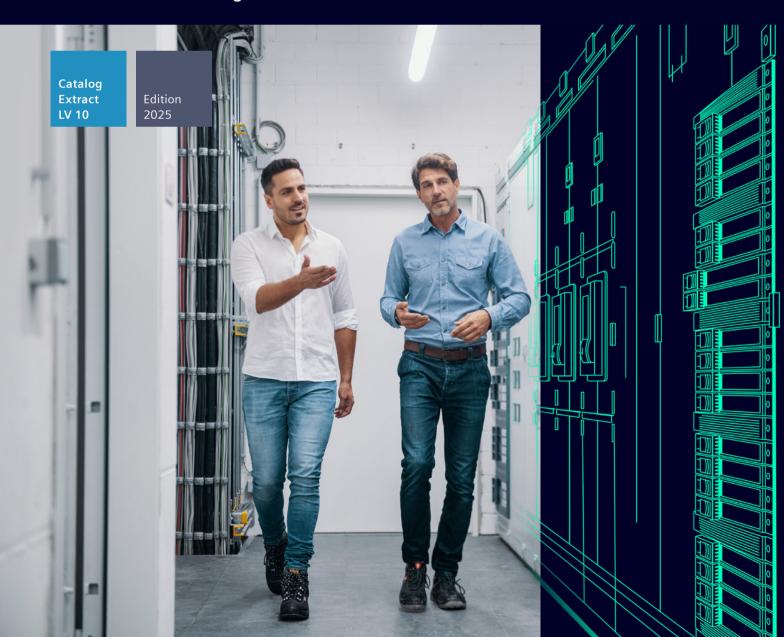
### **SIEMENS**

**SENTRON • SIVACON • ALPHA** 

# Low-Voltage Power Distribution and Electrical Installation Technology

Measuring Devices, Power Monitoring and Digitalization Solutions

siemens.com/lowvoltage

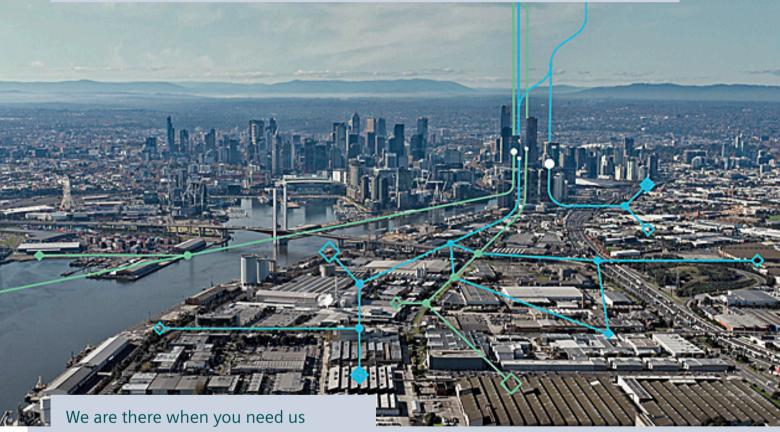


## Innovative solutions for industrial controls and power distribution

Reliable components, systems and software solutions 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.



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

#### Catalog LV 10 · 2025

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.

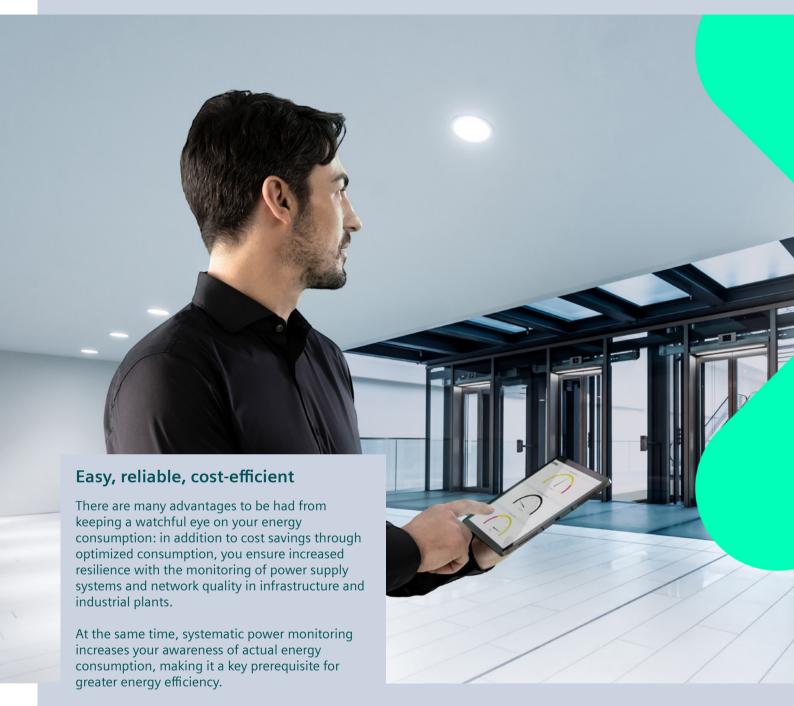
All illustrations are not binding.

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## Low-Voltage Power Distribution and Electrical Installation Technology

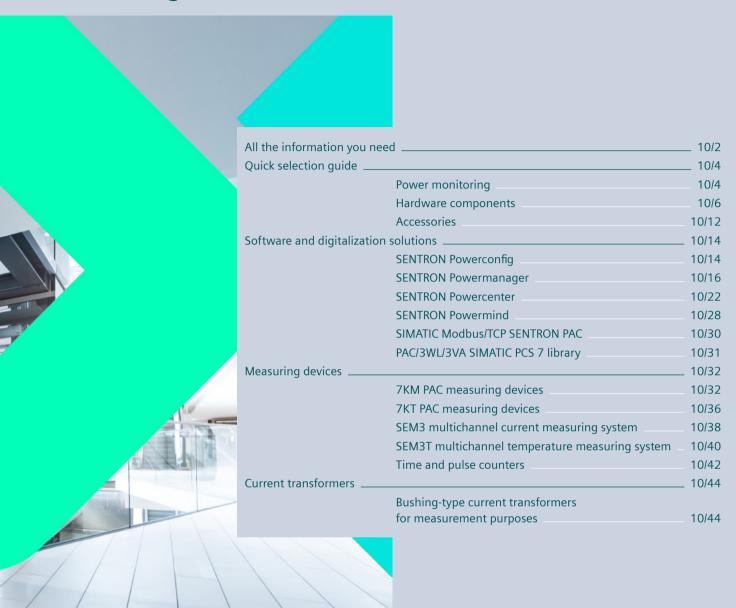
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Integration into open IoT operating systems such as Insights Hub results in even greater optimization potential.

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



### 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 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)
- SFM3<sup>TM</sup>
- 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

**Mobile App** 





Web interface integrated

**SENTRON Powerconfig** 

1) 2)

### 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 Free of charge Free of charge Operating environment Android, iOS System requirements Browser 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 PAC3120 7KM PAC3220 7KM PAC4200 7KM PAC4220 7KM PAC5200 7KT PAC1200

Measuring devices for buildings and infrastructure



Circuit breakers







7KT PAC1600 SEM3, SEM3T

7KM PAC1020

7KM PAC3200T

7KM PAC2200, PAC2200CLP

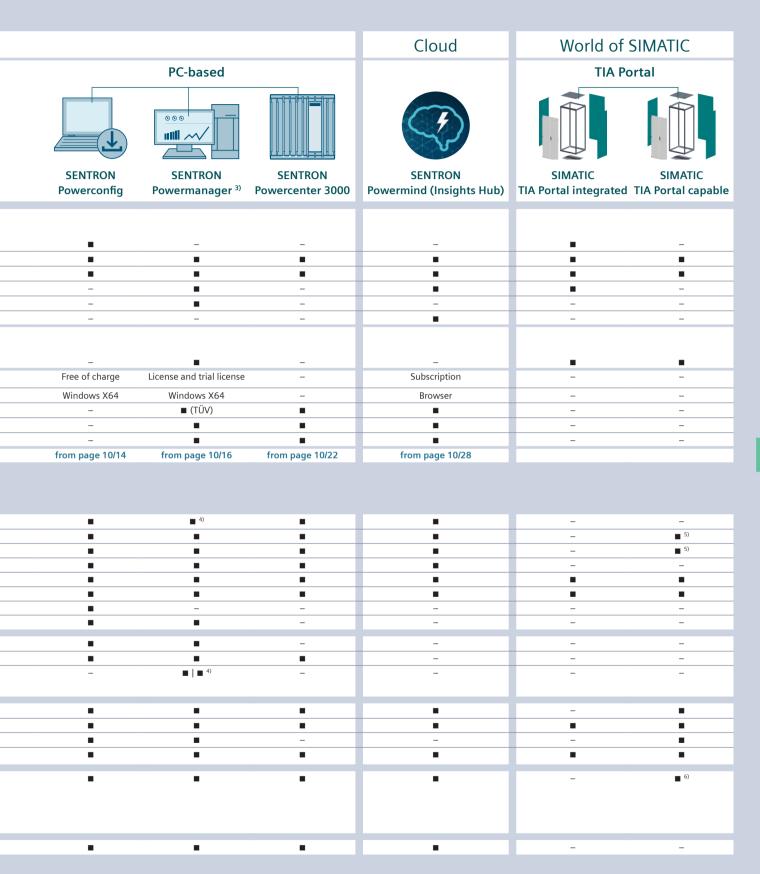
BWA	
BWL	
3WL10, 3VA27	
BVA ETU5/8	



SENTRON Powercenter 1000/1100 5ST3 COM AS+FC, 5ST3 COM RCA, 5SL6 COM MCB, 5SL6 COM RCM MCB, 5SV6 COM AFDD/ MCB, 5TY1 COM ECPD, 3NA COM LV HRC, 3RV2 COM

### Other Modbus devices

- Function available
- Function not available
- 1) Via WiFi <sup>2)</sup> Via gateway (PAC4200)
- 3) Incl. module for Desigo CC building management
- 4) Via XML/JSON
- 5) Via SPP2000
- 6) Via Modbus TCP

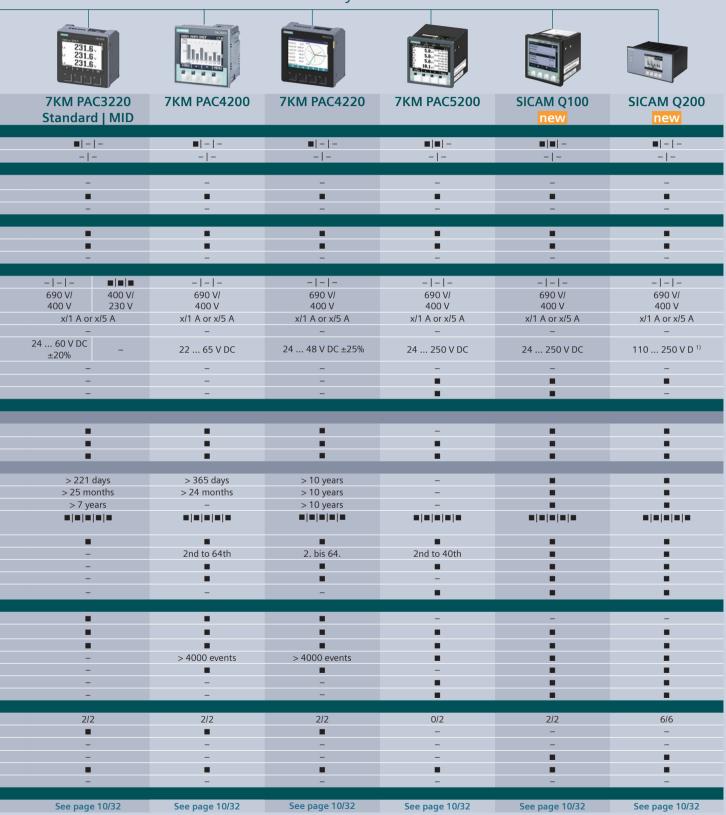


### Hardware components

				Industry	
	231.6 231.6 231.6 231.6				231.6. 231.6. 231.6.
	7KM PAC1020	7KM PAC2200	7KM PAC2200CLP	7KM PAC3200T	7KM PAC3120 Standard   MID
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 version   PTB-A50.7   PTB firmware update	- - -		<b>=</b>   <b>=</b>  -	- - -	- - -
Max. input voltage L-L/L-N	400 V/	400 V/	400 V/	400 V/	690 V/ 400 V/
maxi input voltage 2 2/2 11	230 V	230 V	230 V	230 V	400 V 230 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
Direct connection version	-	65 A	65 A	-	-
DC power supply unit with					24 60 V DC
extra-low voltage version	_	_	_	-	±20%
1-phase counter version	-			-	-
Electrically isolated voltage inputs	-	-	-	-	-
Version without display (for web interface)	-	-	-		-
Evaluation					
Management and addition					
Measured quantities					_
Average value of measured values		•	•	•	•
Average value of measured values Voltage, current, frequency	:	•	•	•	•
Average value of measured values Voltage, current, frequency Power, power factor	i	_		_	
Average value of measured values Voltage, current, frequency Power, power factor Energy measurement		•		- :	-:-
Average value of measured values Voltage, current, frequency Power, power factor Energy measurement Daily energy storage		> 221 days	> 10 years	> 221 days	> 221 days
Average value of measured values Voltage, current, frequency Power, power factor Energy measurement		•		- :	-:-
Average value of measured values Voltage, current, frequency Power, power factor Energy measurement Daily energy storage Monthly energy storage		> 221 days > 25 months	> 10 years > 10 years	> 221 days > 25 months	> 221 days > 25 months
Average value of measured values  Voltage, current, frequency  Power, power factor  Energy measurement  Daily energy storage  Monthly energy storage  Yearly energy storage	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency  Power, power factor  Energy measurement  Daily energy storage  Monthly energy storage  Yearly energy storage  Apparent   Active   Reactive energy   p.f.   power factor  Distortion factor THD (voltage, current)	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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)	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values Voltage, current, frequency Power, power factor Energy measurement 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 Monitoring functions Operating hours counter	-	> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring	-	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions		> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions Event log		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years             -	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions Event log Gateway function		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years             -	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions Event log Gateway function Reporting acc. to EN 50160		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions Event log Gateway function Reporting acc. to EN 50160 Integrated fault recorder		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years             -	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  Monitoring functions Operating hours counter Limit monitoring Logic functions Event log Gateway function Reporting acc. to EN 50160 Integrated fault recorder Integrated communications interfaces		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years  > 10 years	> 221 days > 25 months > 7 years	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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		> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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 S0 interface	- - - - - - - - - - - - - - - - - - -	> 221 days > 25 months > 7 years	> 10 years > 10 years > 10 years > 10 years  > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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 S0 interface M-Bus	- - - - - - - - - - - - - - - - - - -	> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years  > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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 S0 interface	- - - - - - - - - - - - - - - - - - -	> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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 S0 interface M-Bus RS485 (Modbus RTU)	- - - - - - - - - - - - - - - - - - -	> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years             -	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years
Average value of measured values  Voltage, current, frequency Power, power factor  Energy measurement  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  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 S0 interface M-Bus RS485 (Modbus RTU) Ethernet with Modbus TCP	- - - - - - - - - - - - - - - - - - -	> 221 days > 25 months > 7 years              -	> 10 years > 10 years > 10 years > 10 years             -	> 221 days > 25 months > 7 years              -	> 221 days > 25 months > 7 years

1) From 01/2025 universal power supply unit

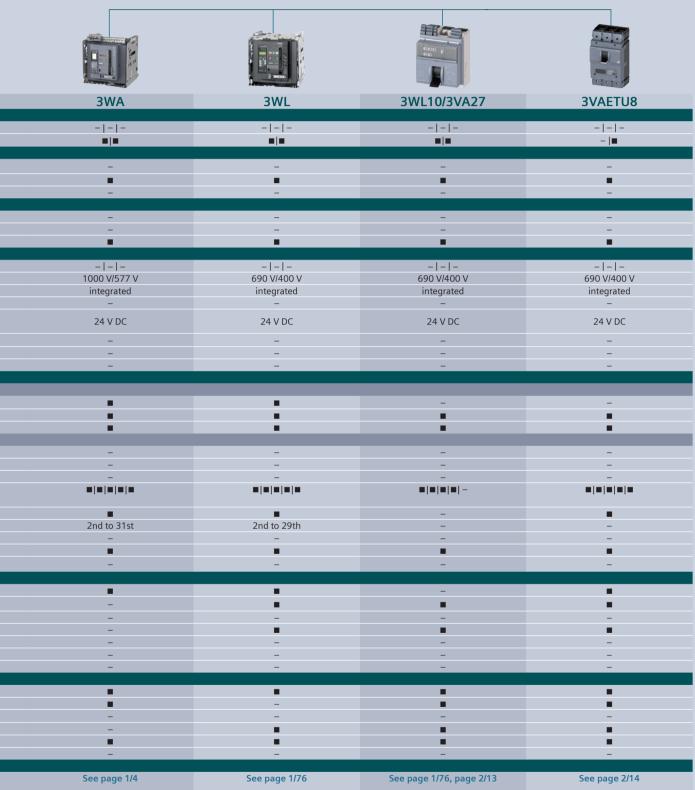
### Industry



### Hardware components

	Bu	ildings and infrastruct	ure
	=1=1=1=	Carlotte Labour	
	Manus Time (Manus)	my and b	
	7KT PAC1200 new	7KT PAC1600	SEM3
Type of mounting	I=1	1-1	
Front mounting   DIN rail   Screw mounting Withdrawable   Fixed-mounted	-  <b>■</b>  - - -	-  <b>■</b>  - - -	- -  <b>■</b> - -
Measuring connection			
Direct measurement			-
Transformer measurement			-
Multichannel measuring system		-	
Suitable transformers			
Window-type current transformers	•		
Folding transformer	•		
Integrated transformer	•	-	
Commissioning MID version   PTB-A50.7   PTB firmware update	- - -	<b>-</b>  - -	- - -
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)		-	
Evaluation			
Measured quantities Average value of measured values		_	_
Voltage, current, frequency	-	-	-
Power, power factor	-	-	
Energy measurement			
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	-	-	-
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	2/1
SO interface	-		
M-Bus			-
RS485 (Modbus RTU)	_		
Ethernet with Modbus TCP		<del>-</del>	•
BACnet	-	-	
Further information			
	See page 10/37	See page 10/36	See page 10/38

### Circuit breakers



### Hardware components

### Circuit protection devices

See page 3/54 and 4/66

		<b>a</b>	
	SENTRON Powercenter 1100 new	5ST3 COM auxiliary switches and fault signal contacts	5SV6 COM AFDD/MCB
Communications interfaces			
Radio link	•	•	•
Modbus TCP	•	-	-
Bluetooth	•	-	-
Gateway function	•	-	-
Secure protocol (https)	•	-	-
Login (role-based)	•	-	-
Web server	-	-	-
Cloud (MQTT)	-	-	-
Compatible with SENTRON Powercenter 1000	-		
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	-	-	

Switching function Remote switching RCCB test function Digital input Time delay Timing function

**Further information** 

Configuration of protective function

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

### Circuit protection devices



### Accessories





### **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

- 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 measuringcapable 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

Free download SENTRON Powerconfig mobile via:

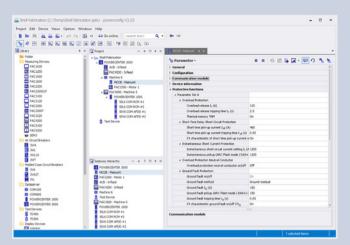


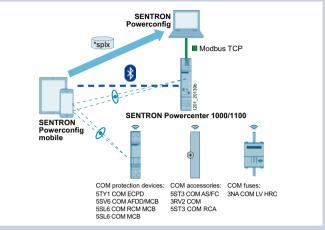


**App Store** 

**Play Store** 

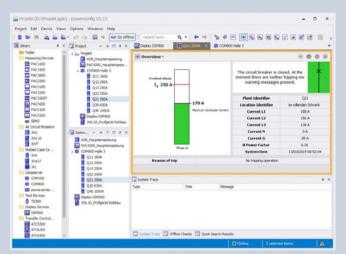
- Service functions:
  - Detection of devices and acquisition of measured quantities and status information via different networks, e.g. via
  - Device and status acquisition via local interfaces, such as Bluetooth and USB
  - Acquisition and archiving of historic records, such as load profiles and events
  - 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



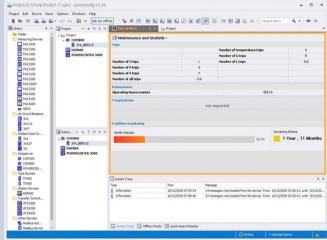


Setting of parameter values

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.

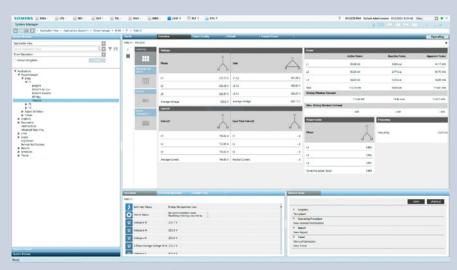
The "Trial" license gives customers the opportunity to gain initial experience with SENTRON Powermanager during a 60-day test phase. The application can still be used by purchasing a regular license.

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

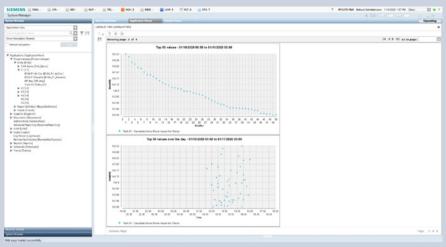
You will find training courses on the internet at www.siemens.com/sitrain-lowvoltage



SENTRON Powermanager – Measuring device diagram



SENTRON Powermanager – Overview of measuring devices



SENTRON Powermanager – Load duration report



#### Health Dashboard



SENTRON Powercenter 1000 Dashboard

### **SENTRON Powermanager**

### PC-based power monitoring software

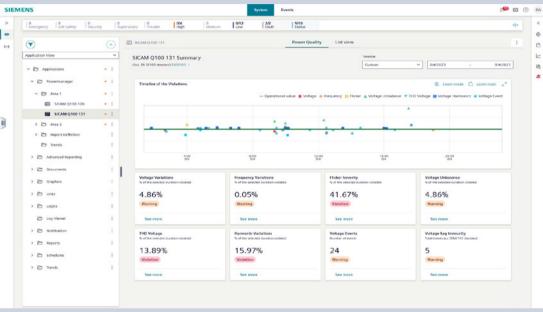




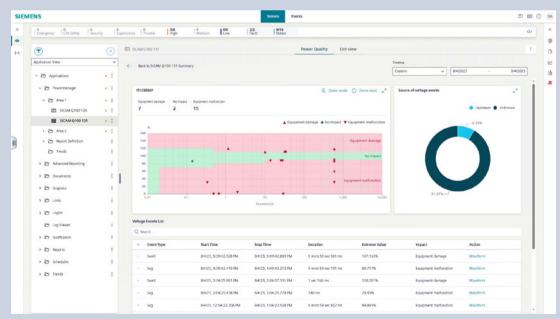
### **SENTRON Powermanager PQ Advisor new**

The Power Quality Advisor in the SENTRON Powermanager enables the automatic evaluation and archiving of power quality information from the SICAM Q100 and Q200 devices in the SENTRON 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.

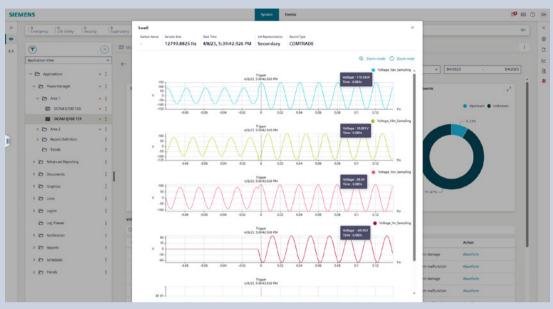
The integrated and dedicated assessment of the waveform enables a detailed evaluation of the cause of the power quality



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.
SENTRON Powermanager		
Extended Package	Full product license for up to 10 devices, 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 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	7KN2711-1CE40-0YC0
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
Option packs		
Graphics Editor 60 Days" option pack	Option for creating any number of freely configured graphics, validity period limited to 60 days	7KN2712-0CE40-0YC0
'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 JA/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	7KN2712-6CE40-0YC0
ENTRON Powermanager SUR-Unit	Update – Extend subscription period by 12 months	7KN2713-7CE40-0YC0
ENTRON Powermanager SUS-Unit	Update – Start new 12-month subscription period	7KN2713-8CE40-0YC0
SENTRON Powermanager BACnet protocoll" option pack	Creating, evaluating and managing individual devices with BACnet communication in Powermanager	7KN2712-3CE40-1YC0
SENTRON Powermanager EC 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
System packages		
System 1	Package comprising  1 × SENTRON Powermanager Extended  1 × PAC4200  1 × PAC3120  1 × RS485 modules	7KN2715-1CE40-0YC0
System 3	Package comprising 1 × SENTRON Powermanager Extended 3 × PAC3220	7KN2715-3CE40-0YC0
System 4	Package comprising  1 × SENTRON Powermanager Extended  1 × PAC4200  4 × PAC1600  1 × RS485 module	7KN2715-4CE40-0YC0
System 5	Package comprising 1 × SENTRON Powermanager Extended	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

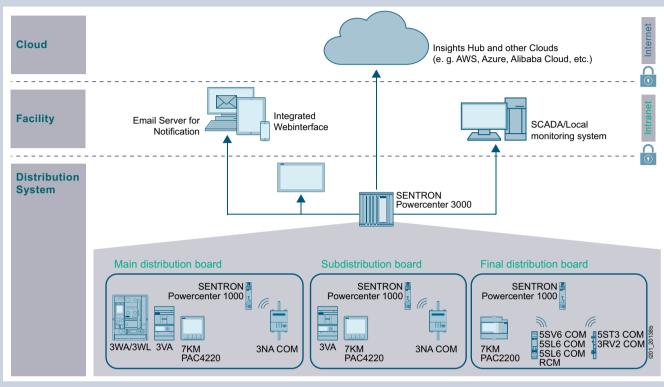
- In the web interface of the SENTRON Powercenter 3000 via the predefined device dashboards and the customer-specific dashboards
- Can also be output as a report
- Interfaces for the digitalization of low-voltage
  - Integrated and easy-to-configure communication with SENTRON Powermind (see separate 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

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 1)	7KN1300-1AA00-0YA0
SENTRON Powercenter 3000 device expansion (20)	License for an additional 20 devices 1)	7KN1300-2AA00-0YA0
SENTRON Powercenter 3000 device expansion (50)	License for an additional 50 devices 1)	7KN1300-3AA00-0YA0
SENTRON Powercenter 3000 device expansion (100)	License for an additional 100 devices 1)	7KN1300-4AA00-0YA0

<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).



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.

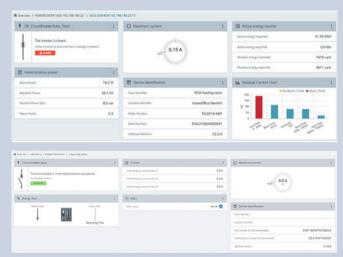
#### Predefined dashboards

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

### **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.

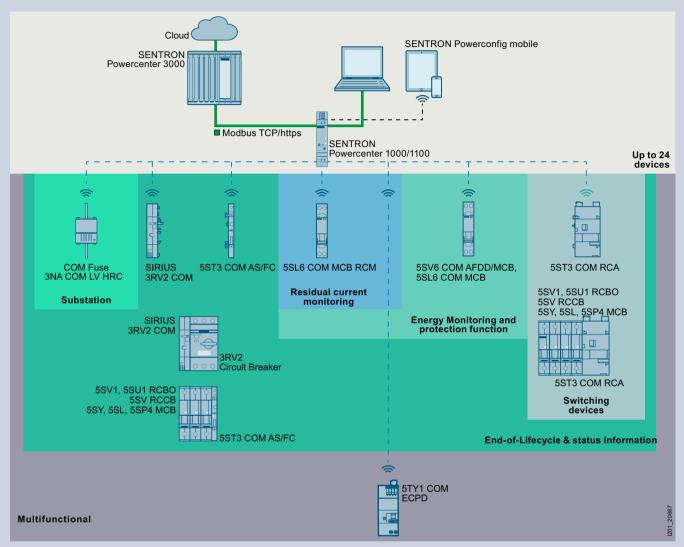
The integrated Bluetooth interface enables simple on-site communication and commissioning via the SENTRON Powerconfig mobile app. With the REST API via https, which is integrated by default, and the access authorization of various roles via login and password, the power center is well protected in terms 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 new	24 V DC SELV	SELV 2 × Ethernet (Modbus TCP/https)		7KN1111-0MC00
Bluetooth	64	7KN1111-0MC01		

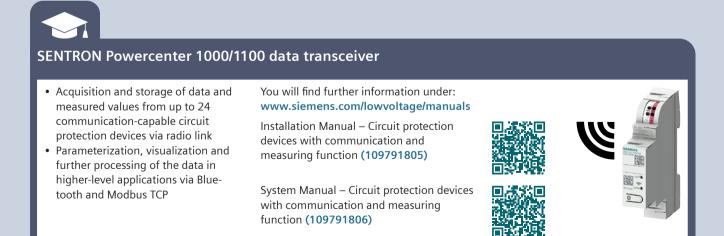
### Note:

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

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



### **SENTRON Powermind**

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



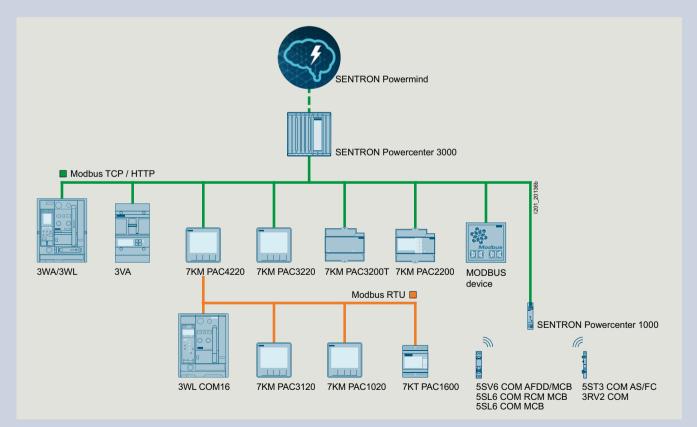
SENTRON Powermind is aimed equally at energy managers, facility managers and/or operators. For energy managers, predefined, automated representations and analyses of energy data are available, such as:

- 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

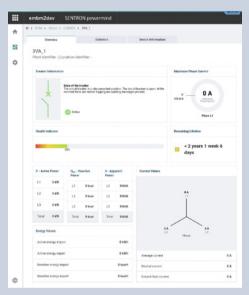
You will find further information on the Insights Hub Store at www.dex.siemens.com/industrial-iot/step-4-book-apps-and-extras/sentron-powermind



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**

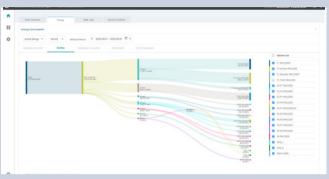
- · Comparison of the energy consumption of two periods, for example, to assess the effectiveness of energy saving measures
- Representation of the active power as mean and min/max values in a line diagram or heatmap

### **SENTRON Powermind**

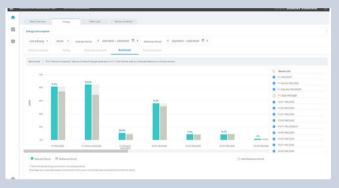
Cloud-based solution for data visualization and analysis in power distribution systems

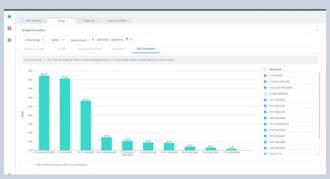












Creating transparency and analyzing energy data

- 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

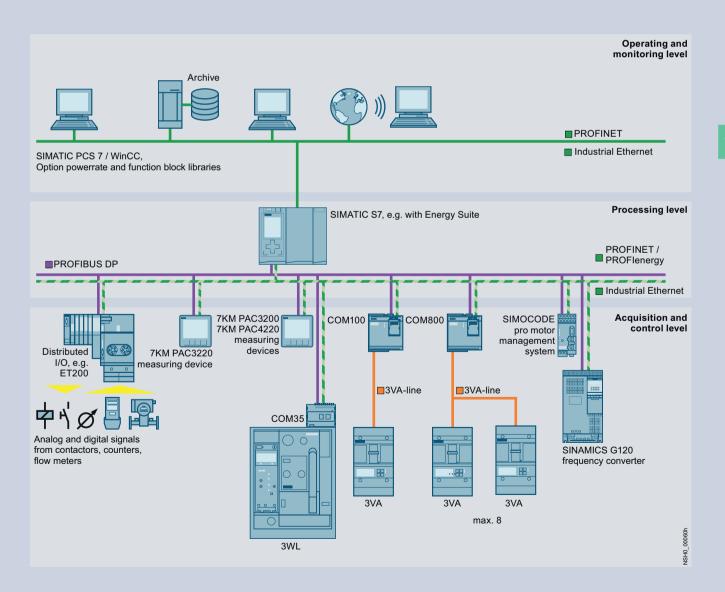
For 7KM PAC3200/4200 measuring devices

Use and version	Valid for	Туре	Article No.
Communication via the integrated	1 CPU and up to 20 SENTRON PACs	Modbus/TCP 20 SENTRON PAC	6AV6676-6MA30-0AX0
PN interface for reading values out	1 CPU and up to 100 SENTRON PACs	Modbus/TCP 100 SENTRON PAC	6AV6676-6MA30-1AX0
of PAC3200 and PAC4200 devices, single license	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			
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:  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	7KN2780-0CE24-0YA0
AS runtime license for PAC/3WL/3VA library for SIMATION	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	7KN2780-0CE00-0YC0



### 7KM PAC measuring devices

### Basic units







Connec- tions	Power supply	Display	Interface	MID	PIB	7KM PAC1020	PAC2200CLP	7KM PAC32001	/KM PAC3120				
Transform	er measuremei	nt											
Screw Self-powered	Self-powered With	Self-powered With		Self-powered With	Self-powered With	Self-powered With	M-Bus	With	Without	-	7KM2200-2EA30-1GA1	-	_
terminals				Without	Without	-	7KM2200-2EA30-1CA1	-	-				
			Modbus RTU	With	Without	-	7KM2200-2EA30-1HA1	-	-				
				Without	Without	-	7KM2200-2EA30-1DA1	-	-				
				With	With	-	-	-	7KM3120-2BA01-1HA0 <sup>1)</sup>				
			Modbus TCP	With	With	-	7KM2200-2EA00-1JB1	-	-				
					Without	-	7KM2200-2EA30-1JA1	-	-				
				Without	Without	-	7KM2200-2EA30-1EA1	-	-				
	AC/DC	With	Modbus RTU	Without	Without	7KM1020-0BA01-1DA0	-	-	7KM3120-0BA01-1DA0				
	wide-range		Modbus TCP	Without	Without	-	-	-	-				
	unit unit	power supply unit	Modbus TCP/RTU	Without	Without	-	-	-	-				
		Without	Modbus TCP	Without	Without	-	-	7KM3200-0CA01-1AA0	_				
	DC power	With	Modbus TCP	Without	Without	-	-	-	-				
	supply unit with extra- low voltage	with extra-		Modbus RTU	Without	Without	-	-	-	7KM3120-1BA01-1EA0			
Ring cable lug connec- tion	AC/DC wide-range power supply unit	With	Modbus TCP	Without	Without	-	-	-	-				
Direct mea	asurement												
Screw	Self-powered	With	M-Bus	With	Without	-	7KM2200-2EA40-1GA1	-	-				
terminals				Without	Without	-	7KM2200-2EA40-1CA1	-	-				
			Modbus RTU	With	Without	-	7KM2200-2EA40-1HA1	-	_				
				Without	Without	-	7KM2200-2EA40-1DA1	-	-				
			Modbus TCP	With	With	-	7KM2200-2EA40-1JB1	-	-				
					Without	-	7KM2200-2EA40-1JA1	-	-				
				Without	Without	-	7KM2200-2EA40-1EA1	-	-				

Further technical specifications		7KM1020	7KM2200	7KM3200	7KM3120-0	7KM3120-1	7KM3120-2
Basic data							
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%	-
Measuring inputs							
Transformer connection	Secondary input current I <sub>e</sub>	x/1 A or x/5 A					
Direct connection	Input voltage U <sub>e</sub> 3 50/60 Hz AC	400/230 V			690/400 V		400/230 V
	Rated current I <sub>n</sub>	-	65 A	-			
1) Additional AC/DC wide-ran	<sup>2)</sup> From 01/2025 universal power supply unit			3) Without binary modules			

Quick selection guide, page 10/6















7KM PAC3220	7KM PAC4200	7KM PAC4220	7KM PAC5200	SICAM Q100 new	SICAM Q200 new
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	_	-	_	_	-
7KM3220-2BA01-1JA0 <sup>1)</sup>	-	-	-	-	-
-	-	-	-	-	-
_	-	-	_	-	-
-	-	-	-	-	-
7KM3220-0BA01-1DA0	7KM4212-0BA00-3AA0	7KM4220-0BA01-1EA0	7KM5412-6BA00-1EA2	7KG9501-0AA01-2AA1	-
-	-	-	-	7KG9501-0AA31-2AA1	7KG9711-0AA10-0BB0 <sup>2) 3)</sup> 7KG9711-0JJ10-0BB0 <sup>2)</sup>
-	-	-	7KM5412-6CA00-1EA8	-	-
7KM3220-1BA01-1EA0	7KM4211-1BA00-3AA0	7KM4220-1BA01-1EA0	-	-	-
-	-	-	-	-	-
-	7KM4212-0BA00-2AA0	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-		-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
=	-	-	-	=	-

7KM	3220-0	7KM3220-1	7KM3220-2	7KM4212	7KM4211	7KM4220-0	7KM4220-1	7KM5412	Q100	Q200
Front	mounting							Front moun- ting/DIN rail	Front moun- ting/DIN rail (optional)	Front mounting
-									96 mm	192 mm
96 ×	96 mm									96 × 192 mm
100 . ±10%	250 V 6	-	100 250 V ±10%	95 240 V ±10%	-	95 250 V ±10%	-	110 230 V ±10%	24 240 V	100 240 V
100 . ±10%		24 60 V ±20%	-	110 340 V ±10%	22 65 V ±10%	110 270 V ±10%	24 48 V ±25%	24 250 V ±10%	24 240 V	100 240 V
x/1 A	or x/5 A									
690/4	400 V		400/230 V	690/400 V	500/289 V	690/400 V				

# 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 PAC1020/3100/3120/3200/3220/4200/4220
- 10 holders for 5 PAC devices
- For seamless side-by-side mounting of the devices (without spaces)

7KM9900-0GA00-0AA0

7KM PAC3120

**7KM PAC3220** 

7KM9900-0SA00-0AA0

7KM PAC3100

**7KM PAC3200** 

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

Spare part package comprising:
Device holders for panel mounting

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 E	thernet PROFINET communication module		
	<ul> <li>Latest PROFINET switching properties</li> <li>52 system redundancy for operation in H systems</li> <li>CiR Configuration in Run</li> <li>Firmware update via the modules for PAC4200 and PAC3220</li> </ul>	7KM9300-0	NAE02-0AA0
7KM PROFIBLIS	DP communication module		
	of Communication module		
		7KM9300-0	AB01-0AA0
7KM RS485 com	munication module		
*******		7KM9300-0 <i>A</i>	M00-0AA0 <sup>1)</sup>
7KM PAC 4DI/2D	O expansion module		
**************************************		7KM9200-0AB00-0AA0	-
7KM PAC I(N), I(	Diff), analog expansion module		
COLOR DE LA COLOR	To add the following functions to the measuring inputs:  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	
		/ KNI9200-UADUU-UAAU	

<sup>1)</sup> 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

# 7KT PAC measuring devices

# PAC1600 basic unit



Connections	Version	Power supply	Display	Interface	MID	7KT PAC1600
Transformer meas	urement					
Screw terminals	3-phase	Self-powered	With	Modbus RTU	Without	7KT1661
					With	7KT1662
				M-Bus	Without	7KT1663
					With	7KT1664
				S0 interface	Without	7KT1672
					With	7KT1673
	3-phase, universal	Auxiliary power:	With	-	Without	7KT1681
		100 240 V AC, 110 250 V DC 50/60Hz		Modbus RTU	Without	7KT1682
Direct measureme	nt					
Screw terminals	1-phase	Self-powered	With	Modbus RTU	Without	7KT1651
					With	7KT1652
				M-Bus	Without	7KT1653
					With	7KT1654
				S0 interface	Without	7KT1655
					With	7KT1656
	3-phase	Self-powered	With	Modbus RTU	Without	7KT1665
					With	7KT1666
				M-Bus	Without	7KT1667
					With	7KT1668
				S0 interface	Without	7KT1670
					With	7KT1671

# PAC1200 multichannel current measuring system 1) new



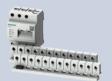
Connections	Version	Power supply	Display	Interface	MID	7KT PAC1200
Direct measurement						
Screw terminals	3-phase	Self-powered	Without	Modbus TCP	Without	7KT1261

PAC1200	7KT PAC1200						
Data manager with 7KT1261, sensor bars							
	Number of connections	Article No.					
	3	7KT1233					
	6	7KT1236					
a da	9	7KT1238					
**************************************	12	7KT1242					
Data manager with 7KT	1261, sensors						
	Current I <sub>e</sub>	Article No.					
	40 A	7KT1254					
3	63 A	7KT1255					

<sup>1) 7</sup>KT1261 available from 01/2025 (successor of 7KT1260)

# PAC1200 Bundles 1) new





Data manager	Sensor bars	Sensors	18 bundle	24 bundle
1 × data manager 7KT1261	2 × 9-sensor bar 7KT1238	18 × sensors 40 A 7KT1254	7KT1224	-
	2 × 12-sensor bar 7KT1242	24 × sensors 40 A 7KT1254	-	7KT1225

<sup>1) 7</sup>KT1224 and 7KT1225 available from 01/2025 (successor of 7KT1222 and 7KT1223)

# SEM3 multichannel current measuring system

# Data manager



Connections	Version	Power supply	Display	Interface	MID	
Transformer measi	urement					
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



	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



• 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 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

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	24 V DC	Without	Modbus TCP	7KT1281-0AA00
	measurement			Modbus TCP/Wi-Fi	7KT1281-0AA10

# Further technical specifications Basic data Installation Measuring inputs Temperature sensors SEM3T DIN-rail mounting 0 to 130 °C

# Accessories

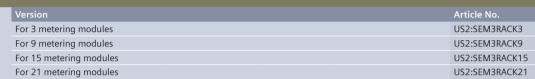
# Metering module



- 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

Merci	Iacks
	Am.
-11	CHILLIAN .





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



<b>6</b> 25.	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
e	Cylindrical sensor		7KT1281-2CA00



# Time and pulse counters

# Mechanical counting mechanisms







Display	Resetting	Rated frequency	Rated control supply voltage $U_{\rm c}$	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 cov	er				
	Degree of protection	Scope of supply	Article No.	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

				4NC <sup>1)</sup>		7KT	3NJ <sup>1)</sup>	
				1-phase		3-phase	1-phase	
						The state of the s	SIEMENS NAME SAMP OF THE SAMP	SIEMENS PRIME SINCE ON VARIETY AND ASSESSMENT ON VARIETY AND ASSESSMENT ON EXTRACTS ON EXTRACTS
Size	Internal diameter	Rated primary	Rated power	Secondary rated current $I_{sr}$				

Size	Internal diameter	Rated primary current I <sub>pr</sub>	Rated power	Secondary rated	current I <sub>sr</sub>			
				5 A	1 A	5 A	5 A	1 A
Accura	cy class 0.2s							
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	-	-	-	-
		500 A	5 VA	4NC5126-2FE21	-	-	-	-
5	26 mm	600 A	5 VA	4NC5227-2FE21	-	-	-	-
		700 A	5 VA	4NC5228-2FE21	_	-	_	_
		800 A	5 VA	4NC5231-2FE21	-	-	_	_
		1000 A	5 VA	4NC5232-2FE21	-	-	-	-
Accura	cy class 0.5							
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		_	_	_
2	28 mm	200 A	5 VA	4NC5222-2DE21		_	_	_
		250 A	5 VA	4NC5223-2DE21		_	_	_
		300 A	5 VA	4NC5224-2DE21		_	_	_
		400 A	5 VA	4NC5225-2DE21		_	_	_
	36 mm	400 A	5 VA	4NC5325-2DE21		_	_	_
3	30 111111	500 A	5 VA	4NC5326-2DE21	4NC5326-0DE21	_	_	_
		600 A	5 VA	4NC5327-2DE21		_	_	_
		750 A	5 VA	4NC5330-2DE21		_	_	_
		800 A	5 VA	4NC5331-2DE21	-	_	_	_
4	41 mm	800 A	10 VA	4NC5431-2DH21	4NC5431-0DH21	_	_	_
	71111111	1000 A	10 VA	4NC5432-2DH21	4NC5431-0DH21			
		1200 A					_	-
		1500 A	10 VA 10 VA	4NC5433-2DH21	4NC5433-0DH21		_	_
				4NC5435-2DH21	4NC5435-0DH21			_
		1600 A	15 VA	4NC5436-2DK21		-	-	-
		2000 A	20 VA		-	-	-	-
		2500 A	25 VA	4NC5440-2DM21		-	-	_
		3000 A	30 VA	4NC5441-2DN21	-	-	-	-
Accura	cy class 0.5 calib		4.5.44	_			24446000 22200	21115000 222
-	14 mm	100 A	1.5 VA	-	-	-	3NJ6920-3BD23	3NJ6920-3BD1
		150 A	2.5 VA	-	-	-	3NJ6920-3BE23	3NJ6920-3BE1
	15 mm	200 A	2.5 VA	-	-	-	-	3NJ6930-3BF1
		200 A	2.5 VA	-	-	-	3NJ6930-3BF23	-
		250 A	2.5 VA	-	-	-	-	3NJ6930-3BG1
		250 A	2.5 VA	-	-	-	3NJ6930-3BG23	-
	32 mm	300 A	5 VA	-	-	-	3NJ6940-3BH23	3NJ6940-3BH1
		400 A	5 VA	-	-	-	3NJ6940-3BJ23	3NJ6940-3BJ1
		500 A	5 VA	-	-	-	3NJ6940-3BK23	3NJ6940-3BK1
		600 A	5 VA	_	-	-	3NJ6940-3BL23	3NJ6940-3BL1

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

Note:

Maximum voltage for equipment (rms value)  $U_{\rm m}$  = 720 V



				_	_			
Size	Internal diameter	Rated primary current I <sub>pr</sub>	Rated power P <sub>n</sub>	Secondary rated	current I <sub>sr</sub>			
				5 A	1 A	5 A	5 A	1 A
Accura	cy class 1.0							
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	-	-	-
		100 A	2.5 VA	4NC5117-2CC21	4NC5117-0CC21	-	-	-
	13 mm	100 A	2.5 VA	-	-	7KT1200	-	-
	19 mm	150 A	2.5 VA	4NC5121-2CC21	4NC5121-0CC21	-	-	-
	13 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	-	-	-	-

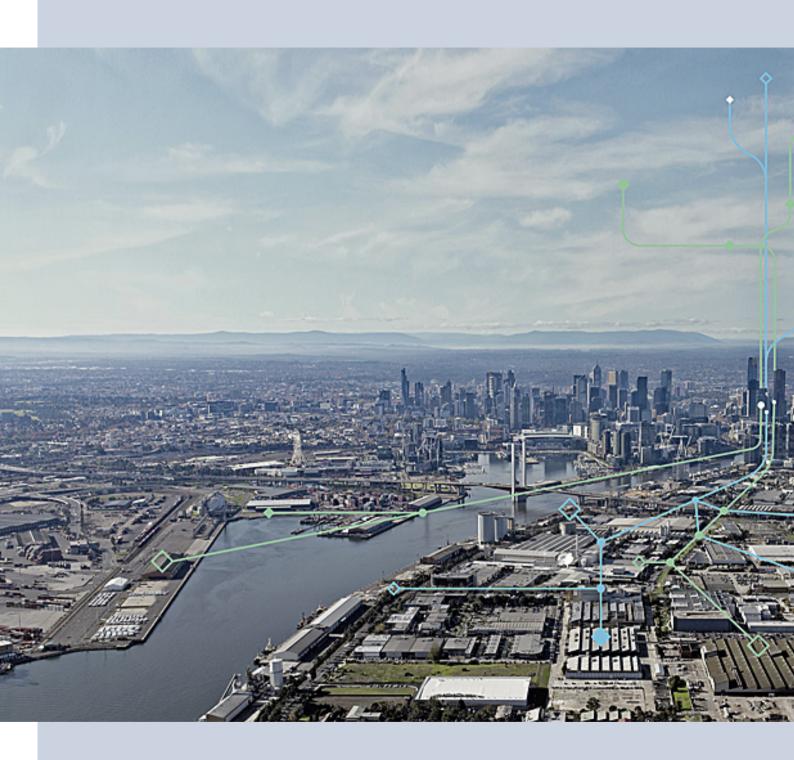
<sup>1)</sup> Overcurrent limiting factor FS5

Note: Maximum voltage for equipment (rms value)  $U_{\rm m}$  = 720 V

# Accessories



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	-	-	-



A/2

A/4



# Α

# 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)"
   <sup>11</sup> and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen für Infrastructure & Industry Geschäft (Deutsches Recht)"<sup>1)</sup> (available only in German) and/or
- for other services, the "Supplementary Terms and Conditions for Services for Infrastructure & Industry Business (German Law) ("BL")"
   <sup>1</sup>) and/or
- for other products the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"<sup>1)</sup>.

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"<sup>1)</sup>, 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)"
   <sup>11</sup> and/or
- for other services the "International Terms & Conditions for Services"
   <sup>(1)</sup> supplemented by "Software Licensing Conditions"
   and/or
- for other products the "International Terms & Conditions for Products"<sup>1)</sup> supplemented by "Software Licensing Conditions"<sup>1)</sup>

#### 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.

<sup>1)</sup> 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

# Α

# 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 or 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**

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Conversion tool	www.siemens.com/conversion-tool
Image database	www.siemens.com/lowvoltage/picturedb
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Online Support App	www.siemens.com/support-app
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	www.siemens.com/lowvoltage/SiemensEcoTech
SENTRON product phase-out	www.siemens.com/info-sentron

# Catalogs and further information



LV 10 Low-Voltage Power Distribution and **Electrical Installation Technology** SENTRON • SIVACON • ALPHA PDF (E86060-K8280-A101-B9-7600)



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



**3WA Air Circuit Breakers** SENTRON PDF (E86060-K8280-B101-A4-7600)



**SiePortal** Information and Ordering Platform on the Internet:

sieportal.siemens.com



Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification **SENTRON** 

PDF (E86060-K8280-E347-B2-7600)



Digital Industry Academy www.siemens.com/sitrain



**Industrial Controls SIRIUS** PDF (E86060-K1010-A101-B7-7600)



**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

IC 10

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

## **Cybersecurity information**

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under www.siemens.com/cert.

#### Get more information

www.siemens.com/lowvoltage

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