SIEMENS SENTRON Portfolio for Power Monitoring Instructions

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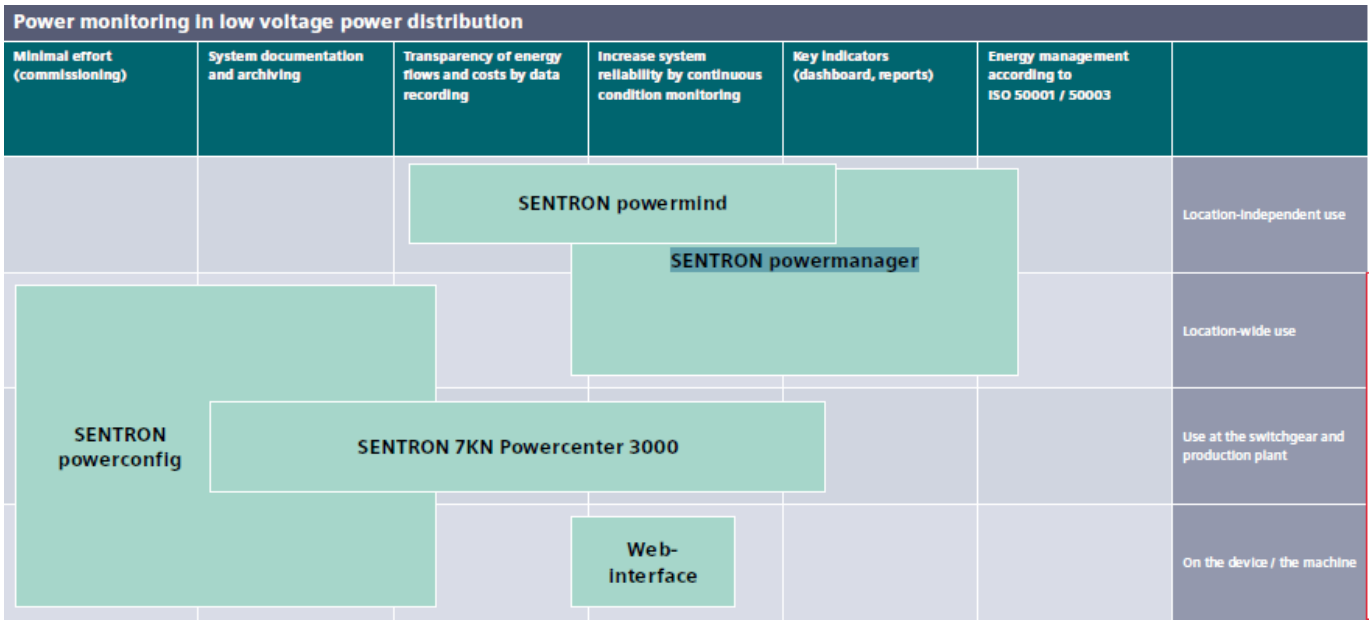
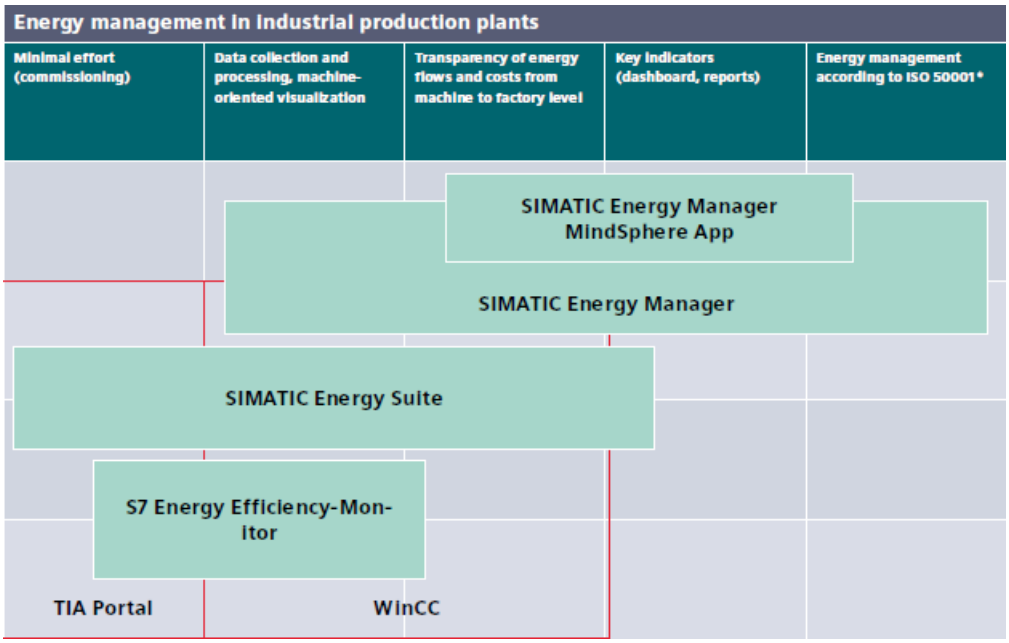
SENTRON Portfolio for Power Monitoring

SENTRON & SIMATIC
software solutions for power monitoring and energy management





SENTRON powerconfig

SENTRON powermanager

SIMATIC Energy Manager

SIMATIC Energy Suite

SENTRON powerconfig Mobile App

SENTRON 7KN Powercenter

S7 Energy Efficiency-Monitor

SIMATIC MindSphere Apps

	Multichannel current measuring system 7KT PAC1200	Multichannel current measuring system SEM3	Measuring device 7KT PAC1600	Measuring device 7KM PAC1020	Measuring device 7KM PAC2200 (CLP)	Measuring device 7KM PAC3120	Measuring device 7KM PAC3200T	Measuring device 7KM PAC5220	Measuring device 7KM PAC4200	Measuring device 7KM PAC5200	Multifunctional recorder SICAM Q100/ Q200	Modular measuring device AI Energy Meter	Molded case circuit breaker 3VA2 ETU 6-series	Air Circuit Breaker 3WA	Air Circuit Breaker 3WL	AFDD and miniature circuit breaker 5SV5 COM AFDD/MCB 5SL6 COM MCB
SENTRON portfolio for power monitoring	The flexible solution for multichannel measuring in final circuits	The efficient solution for multichannel current measuring in the main distribution	The entry-level solution when it comes to energy measurement	The cost-effective entry into power measurement and transparency	The energy meter solution for DIN rail	The cost-effective solution for digital measurement	The compact solution for precise energy measurement	The specialist solution for precise energy measurement	The professional solution for communication and monitoring	The specialist solution for measured value recording and power supply quality	The class A solution for power supply quality	The integrated energy measurement in automation	The specialist solution for protection and energy measurement	The incoming circuit breaker with communication	The incoming circuit breaker with communication	The communication-capable circuit protection devices
U, I, P, Q, S, PF, f, E	U, I, P, Q, S, PF, f, E[1]	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Apparent | active | reactive energy | cosφ	x | x | x | –	x | x | x | x	x | x | x | –	– | x | x | –	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x	x | x | x | –
Maximum input voltage L-L/L-N	400V/230V	480V/277V	400V/230V	400V/230V	400V/230V	690V/400V	400V/230V	690V/400V	690V/400V	690V/400V galvanically separated	690V/400V galvanically separated	480V/277V	690V/400V (integrated)	1000V/577V (integrated)	690V/400V (integrated)	– | 230V
Current transformer connection | direct measuring	x | x (up to 63A)	x | –	x | x (up to 63A – 1-phase, up to 80A – 3-phase)	x/1A | 45A	x | x (up to 65A)	x | –	x | –	x | –	x | –	x | –	x | –	x | –	Transformer (integrated)	Transformer (integrated)	Transformer (integrated)	– | x
DI / DO	–	2/1	1/2	1/1	1/1	2/2	1/1	2/2 (10/6 with expansion module)	2/2 (10/6 with expansion module)	0/2	Q100: 2/2 Q200: 6/6	via ET200i via S7-1200	EFB300 (optional)	optional	optional	–
Integrated communication	Modbus TCP	BACnet IE MSTP, SNMP, NTP, SMT, Modbus TCP, Modbus RTU	Modbus RTU, M-Bus, S0	Modbus RTU	Modbus TCP, Modbus RTU, M-Bus	Modbus RTU	Modbus TCP	Modbus TCP	Modbus TCP	Modbus TCP	Modbus TCP IEC 61850	PROFINET PROFIBUS	–	–	–	Wireless
Communication via expansion module	–	–	–	–	–	–	–	Modbus RTU PROFINET PROFIBUS	Modbus RTU PROFINET PROFIBUS	–	Q100: 1 x Modbus TCP + IEC 61850 Q200: 2 x Modbus TCP + IEC 61850	Modbus TCP via CPU	Modbus TCP Modbus RTU PROFINET PROFIBUS	Modbus TCP PROFINET	Modbus TCP Modbus RTU Profinet Profibus	Modbus TCP via 7KN Powercenter 1000
I(N), I(Diff)	–	–	–	–	–	–	–	with expansion module	with expansion module	–	x	–	x	x	–	–
Analog input	–	–	–	–	–	–	–	with expansion module	with expansion module	–	–	via ET200i / via S7-1200	–	–	–	–
Load profile record	x	x	–	–	x (PAC2200 CLP)	–	–	–	x	x	x	in S7 CPU	x	x	x	–
Software interface	Webinterface, App (iOS & Android), powerconfig, powermanager	Webinterface, powermanager	powerconfig, powermanager	powerconfig, powermanager	Webinterface, powerconfig, powermanager	powerconfig, powermanager	Webinterface, powerconfig, powermanager	Webinterface, SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	Webinterface, SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	Webinterface, powerconfig, powermanager	Webinterface/ SICAM PQS/PQA, powermanager (online values)	SIMATIC/ SIMATIC Energy Suite	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	via 7KN Powercenter 1000 powerconfig, powermanager
THD | Flicker, fault recorder, EN50160 reporting	– | –	– | –	– | –	– | –	– | –	x | –	x | –	x | –	x | –	x | x	x | x Transient recording up to 1 µs (Q200)	x | x	x | –	x | –	x | –	– | –
Harmonics	–	–	1, ..., 15.[2]	–	–	–	–	–	1, ..., 64.	2, ..., 40.	Q100: 2–50 kHz Q200: 2–63 kHz, 2–9 kHz, 9–150 kHz Harmonic Direction	2, ..., 40.	1, ..., 15.	2, ..., 31.	1, ..., 29.	–
Accuracy class active energy | reactive energy	1[3] | 1[3] 2 | –	0,2 | 1	1 | 2	1 | 2	1 | 1	0,5 | 2	0,5 | 1	0,5 | 2	0,2 S | 2	0,5 S | 2	0,2 S | 2	0,5 | 1	2 S | 2 (incl. transformer)	2 S | 2 (incl. transformer)	2 S | 2 (incl. transformer)	Class 1[4]
Standard measuring devices	IEC 62053-21	IEC 62053-11, IEC 62053-23, IEC 61010-1, UL 61010-1	IEC 50470-1, IEC 62053-21, IEC 62053-23	IEC 62053-21[5], IEC 62053-23[5]	IEC 62053-22, IEC 62053-23, IEC 61557-12	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL 61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL 61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL 61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, IEC 61000-4-30	IEC 62586-1, IEC 61000-4-30, IEC 61000-4-7, IEC 61000-4-15	IEC 61557-12	IEC 61557-12	IEC 61557-12	IEC 61557-12	IEC 61557-12, IEC 62053-22, IEC 62053-23[5]
MID certified	–	–	x	–	x[6]	–	–	–	–	–	–	–	–	–	–	–
PMD class according to IEC61557-12	PMD 1	PMD 2	PMD 2	PMD 1	PMD 2	PMD 3	PMD 3	PMD 3	PMD 3	PMD 3	PMD 3	PMD 3	PMD 3	PMD 1-3	PMD 3	PMD 2
Order information	siemens.com/product?7KT12	siemens.com/product?US2.SEM3	siemens.com/product?7KT16	siemens.com/product?7KM9020	siemens.com/product?7KM22	siemens.com/product?7KM31	siemens.com/product?7KM32	siemens.com/product?7KM22	siemens.com/product?7KM42	siemens.com/product?7KM5	siemens.com/product?7KG9	siemens.com/product?6CS7	siemens.com/product?3VA2	siemens.com/product?3WA	siemens.com/product?3WL	siemens.com/product?Baustoffkonformität%2C%20Kommunikation

Data transceiver 7KN Powercenter 1000	IoT data platform 7KN Powercenter 3000
Comprehensive data acquisition from communication and measuring capable circuit protection devices • High transparency in the branch circuit • Easy derivation of measures **Connection of up to 24 end devices and caching of selected data** • Comprehensive data availability **Integrated Bluetooth interface** • Mobile data readout on-site via the SENTRON powerconfig mobile app **Integrated MODBUS TCP interface** • Enables connection to SENTRON powerconfig configuration software and SENTRON powermanager power monitoring software for easy visualization and evaluation of data • Connection to cloud solutions (MindSphere) for data analysis with 7KN Powercenter 3000 or with other cloud gateways **Compact design** • Low space requirements in the distribution board (1MW)	**Plug & operate solution for the digitalization of low-voltage power distribution** • Central interface into the switchboard • Up to 32 subordinated devices • Connectivity function for cloudbased applications (MindSphere) • Integrated, user-definable web-interface • Parameterization via SENTRON powerconfig • Load profile record of connected devices **Your benefits:** • Minimization of security efforts • Early detection and prevention of downtimes • Reduction of error frequency and duration • Easy digitalization of brownfield projects • Basis for energy management (such as ISO 50001) Ready for ISO 50001 Ready for IoT
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Documents / Resources

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	SIEMENS SENTRON Portfolio for Power Monitoring [pdf] Instructions SENTRON Portfolio for Power Monitoring, SENTRON, Portfolio for Power Monitoring, Power Monitoring

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Manuals+,