

SENTRON & SIMATIC software solutions for power monitoring and energy management



Smart Infrastructure

Power monitoring in low voltage power distribution

Digital Industry

Energy management in industrial production plants

Minimal effort (commissioning)	System documentation and archiving	Transparency of energy flows and costs by data recording	Increase system reliability by continuous condition monitoring	Key indicators (dashboard, reports)	Energy management according to ISO 50001 / 50003		Minimal effort (commissioning)	Data collection and processing, machine-oriented visualization	Transparency of energy flows and costs from machine to factory level	Key indicators (dashboard, reports)	Energy management according to ISO 50001*
			SENTRON powermanager			location-independent use		SIMATIC Energy Manager MindSphere App			
						location-wide use		SIMATIC Energy Manager			
SENTRON powerconfig		SENTRON 7KN Powercenter 3000				Use at the switchgear and production plant	SIMATIC Energy Suite				
			Webinter-face			On the device / the machine	S7 Energy Efficiency Monitor				
							TIA Portal		WinCC		

* Baselinemanagement, forecast, batch analysis



Order and download information for the software solutions are available here:



[SENTRON powerconfig](#)



[SENTRON powermanager](#)



[SIMATIC Energy Manager](#)



[SIMATIC Energy Suite](#)



[SENTRON powerconfig Mobile App](#)



[SENTRON 7KN Powercenter](#)



[S7 Energy Efficiency Monitor](#)



[SIMATIC MindSphere Apps](#)

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SENTRON
Portfolio for power monitoring
Quick Selection Guide



**SENTRON portfolio
for power monitoring**

	Multichannel current measuring system 7KT PAC1200	Measuring device 7KT PAC1600	Multichannel current measuring system SEM3	Measuring device 7KM PAC2200	Measuring device 7KM PAC3100	Measuring device 7KM PAC3200T	Measuring device 7KM PAC3200	Measuring device 7KM PAC4200	Measuring device 7KM PAC5100	Measuring device 7KM PAC5200	Multifunctional recorder SICAM Q100/Q200	Modular measuring device AI Energy Meter	Molded case circuit breaker 3VA2 ETU 8-series	Air Circuit Breaker 3WL	Circuit Breaker 3WL10/3VA27
U, I, P, f, λ	U*, I, P, S, Q*, f*, λ*	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 x	x x x x
Maximum input voltage L-L/L-N	400 V/230 V	456 V/264 V	480 V/277 V	480 V/277 V	480 V/276 V	480 V/277 V	690 V/400 V	690 V/400 V	690 V/400 V galvanically separated	690 V/400 V galvanically separated	690 V/400 V galvanically separated	480 V/277 V	690 V/400 V integrated	690 V/400 V integrated	690 V/400 V integrated
Current transformer connection direct measuring	x x (up to 63 A)	x x (up to 63 A – 1-phase, up to A – 3-phase)	x -	x x (up to 65 A)	x -	x -	x -	x -	x -	x -	x -	Transformer (integrated)	Transformer (integrated)	Transformer (integrated)	Transformer (integrated)
DI/DO	-	1/2	2/1	1/1	2/2	1/1	1/1	2/2 (10/6 with expansion module)	0/2	0/2	Q100: 2/2 Q200: 6/6	via ET200/via S7-1200	EFB300 (optional)	-	optional
Integrated communication	Modbus TCP	Modbus RTU, M-Bus, SO	BACnet IP, MSTP, SNMP, NTP, SMT, Modbus TCP, Modbus RTU	Modbus TCP, Modbus RTU, M-Bus	Modbus RTU	Modbus TCP	Modbus TCP	Modbus TCP	Modbus TCP	Modbus TCP	Modbus TCP, IEC61850	PROFINET PROFIBUS	-	-	-
Communication via expansion module	-	-	-	-	-	-	Modbus RTU PROFINET PROFIBUS	Modbus RTU PROFINET PROFIBUS	-	-	Q100: 1 x Modbus TCP + IEC61850 Q200: 2 x Modbus TCP + IEC61850	Modbus TCP via CPU	Modbus TCP Modbus RTU PROFINET PROFIBUS	Modbus RTU Modbus TCP PROFIBUS PROFINET	Modbus RTU Modbus TCP
I(N), I(Diff)	-	-	-	-	-	-	with expansion module	with expansion module	-	-	x	-	x	-	-
Analog input	-	-	-	-	-	-	with expansion module	with expansion module	-	-	-	via ET200 / via S7-1200	-	-	-
Load profile record	x	-	x	-	-	-	-	x	x	x	x	in S7 CPU	x	x	x
Software interfaces	Webinterface, App (iOS & Android), powerconfig, powermanager	powerconfig, powermanager	Webinterface, powermanager	Webinterface, powerconfig, powermanager	powerconfig, powermanager	Webinterface, powerconfig, powermanager	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	SIMATIC Energy Suite, SIMATIC Energy Manager PRO, powerconfig, powermanager	Webinterface, 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
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 -	- -
Harmonics	-	1 ... 15. **	-	-	-	-	-	3 ... 31.	2 ... 40.	2 ... 40.	Q100: 2–50 kHz Q200: 2–63 kHz, 2–9 kHz, 9–150 kHz Harmonic Direction	2 ... 40.	-	-	-
Customizable display	Statistical overview in web server	-	-	-	-	-	-	x	x	x	x	with SIMATIC HMI Visualization	-	-	-
Accuracy class active energy reactive energy	1* 1* 2 -	1 2	0.2 1	1 1	1 3	0.5 1	0.5 S 2	0.2 S 2	0.5 S 2	0.5 S 2	0.2 S 2	0.5 1	2 S 2	2 S 2	2 S 2
Standard measuring devices	IEC 61557-12	IEC 50470-3, IEC 62053-21, IEC 62053-22	IEC 62052-11, IEC 62053-22, IEC 61010-1, UL61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL61010-1	IEC 62053-22, IEC 62053-23, IEC 61557-12, UL61010-1	IEC 62053-22/23, 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
MID certified	-	x	-	x	-	-	-	-	-	-	-	-	-	-	-
Order information	siemens.com/product?7KT12	siemens.com/product?7KT16	siemens.com/product?US2-SEM3	siemens.com/product?7KM22	siemens.com/product?7KM31	siemens.com/product?7KM32	siemens.com/product?7KM32	siemens.com/product?7KM42	siemens.com/product?7KM52	siemens.com/product?7KM54	siemens.com/product?7KG9	siemens.com/product?6ES7	siemens.com/product?3VA2	siemens.com/product?3WL	siemens.com/product?3VA27

* Measured in data manager ** 7KT PAC1600 Multimeter ***THD Indication