



SENTRON, measuring device, 7KM PAC4200, LCD, L-L: 690 V, L-N: 400 V, 5 A, 3-phase, Modbus TCP, optional Modbus RTU / PROFINET / PROFIBUS / DI/DO, apparent/active/reactive energy / cos phi, harmonics: 2.-64., THD, class 0.2 acc. to IEC61557-12 or cl. 0.2S acc. to IEC62053-22, wide-range pwr sup. unit AC/DC, screw terminals

Model	
product brand name	SENTRON
design of the product	compact
Measurements	
measuring procedure	
<ul style="list-style-type: none"> for voltage measurement for current measurement 	TRMS TRMS
type of measured value detection	complete
voltage curve	Sinusoidal or distorted
measurable line frequency	
<ul style="list-style-type: none"> initial value full-scale value 	45 Hz 65 Hz
operating mode for measured value detection automatic line frequency detection	Yes
operating mode for measured value detection	
<ul style="list-style-type: none"> set at 50 Hz set to 60 Hz 	No No
Supply voltage	
design of the power supply	Wide-range power supply
type of voltage of the supply voltage	AC/DC
supply voltage at AC	95 ... 240 V
supply voltage at DC	110 ... 340 V
Degree of protection protection class	
protection class IP on the front	IP65
operating resource protection class when installed	safety class II
Suitability	
suitability for operation	Installation in stationary panels in closed rooms
Product Functions	
product function	
<ul style="list-style-type: none"> voltage measurement current measurement active power measurement reactive power measurement frequency measurement 	Yes Yes Yes Yes Yes
Display and operation	
design of the display	LCD
height of the display	54 mm
width of the display	72 mm
color of the background of the display	white

illuminance of display backlight adjustable	Yes
time-controlled reduction of the illuminance of display backlight possible	Yes
display contrast adjustable	Yes
national language on the display screen is supported	ger, en, fr, spa, ita, por, tur, rus, chi, pol
number of keys	4

Communication

number of interfaces according to Fast Ethernet	1
type of electrical connection of the fast Ethernet interface	RJ45 (8P8C)
protocol at the Ethernet interface is supported	MODBUS TCP
transfer rate 1 for Ethernet	10 Mbit/s
transfer rate 2 for Ethernet	100 Mbit/s

Fault limits

reference condition for metering accuracy	Acc. to IEC61557-12
formula for relative total measurement inaccuracy	
<ul style="list-style-type: none"> for measured variable voltage for measured variable current for measured variable output factor for measured variable active energy for measured variable reactive energy 	+/- 0,2 % +/- 0,2 % +/- 2 % Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-22 Class 2 according to IEC61557-12 and/or IEC62053-23

Inputs Outputs

number of digital inputs	2
type of electrical connection at the digital inputs	screw-type terminals
operating conditions for digital inputs external voltage supply	Yes
input voltage at digital input at DC maximum	30 V
number of digital outputs	2
type of switching output	solid state
digital output version	switching or pulse output function
operating voltage as output voltage at DC maximum permissible	30 V
type of electrical connection at the digital outputs	screw-type terminals
output current	
<ul style="list-style-type: none"> at digital output with signal <0> maximum at digital output for signal <1> maximum at the digital outputs at DC limited to 100 ms maximum 	0.2 mA 27 mA 300 mA
internal resistance at the digital outputs	55 Ω
standard for pulse emitter	according to IEC62053-31
pulse duration	
<ul style="list-style-type: none"> initial value full-scale value 	30 ms 500 ms
adjustable time period minimum	10 ms
switching frequency at digital output maximum	20 Hz
property of the output short-circuit proof	Yes
measuring category for digital signals	CATI

Measuring inputs

measurable supply voltage between (PE)N and L at AC maximum rated value	400 V
measurable supply voltage between (PE)N and L at AC	
<ul style="list-style-type: none"> minimum maximum 	11.5 V 480 V
measurable supply voltage between the line conductors at AC maximum rated value	690 V
measurable supply voltage between the line conductors at AC	
<ul style="list-style-type: none"> minimum maximum 	20 V 828 V
voltage measuring range extension with external voltage transformers	yes
line conductors and neutral conductors internal resistance	1.05 MΩ

for voltage measurement	
measuring category for voltage measurement	CATIII
measurable current	
• 1 at AC rated value	1 A
• 2 at AC rated value	5 A
relative measurable current at AC	
• minimum	1 %
• maximum	120 %
current measuring range extension with external current transformers	Yes
zero point suppression for current measurement	0 ... 10 %
measuring category for current measurement	CATIII

Connections

type of connectable conductor cross-sections	
• at the measurement inputs for voltage solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• at the measurement inputs for voltage finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at the measurement inputs for voltage at AWG cables solid	2x 20 to 14
• at the measurement inputs for current solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• at the measurement inputs for current finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at the measurement inputs for current at AWG cables solid	2x 20 to 14
type of electrical connection	
• at the measurement inputs for voltage	screw-type terminals
• at the measurement inputs for current	screw-type terminals

Mechanical Design

fastening method standard rail mounting	No
size of Power Monitoring Device	size 96
height	96 mm
width	96 mm
depth	82 mm
installation depth	77 mm
net weight	543 g
mounting position	vertical

Environmental conditions

ambient temperature during operation	
• minimum	-10 °C
• maximum	55 °C
ambient temperature during storage	
• minimum	-25 °C
• maximum	70 °C
relative humidity at 25 °C without condensation during operation maximum	95 %
installation altitude at height above sea level maximum	2 000 m
degree of pollution	2

Certificates

certificate of suitability as EC Declaration of Conformity	IEC 61010-1: 2001 (2nd Ed.) with Corr. 1, EN 61010-1: 2001 (2nd Ed.) and DIN EN 61010-1:2002 with "Berichtigung 1"
reference code according to EN 61346-2	P

General Product Approval	Declaration of Conformity	Test Certificates
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[Confirmation](#)



[Type Test Certificates/Test Report](#)

other	Dangerous Good
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Further information

Information- and Downloadcenter (catalogues, leaflets,...)

<http://www.siemens.com/energy-automation>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=7KM4212-0BA00-3AA0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/7KM4212-0BA00-3AA0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=7KM4212-0BA00-3AA0

CAX-Online-Generator

<http://www.siemens.com/cax>

Tender specifications

<http://www.siemens.com/specifications>





