# SIEMENS

### Data sheet

## 7KM4212-0BA00-3AA0



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> <li>for voltage measurement</li> </ul>	TRMS	
<ul> <li>for current measurement</li> </ul>	TRMS	
type of measured value detection	complete	
voltage curve	Sinusoidal or distorted	
measurable line frequency		
initial value	45 Hz	
• full-scale value	65 Hz	
operating mode for measured value detection automatic line frequency detection	Yes	
operating mode for measured value detection		
• set at 50 Hz	No	
• set to 60 Hz	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> <li>voltage measurement</li> </ul>	Yes	
<ul> <li>current measurement</li> </ul>	Yes	
<ul> <li>active power measurement</li> </ul>	Yes	
<ul> <li>reactive power measurement</li> </ul>	Yes	
<ul> <li>frequency measurement</li> </ul>	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	Yes
backlight possible	
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> <li>for measured variable voltage</li> </ul>	+/- 0,2 %
<ul> <li>for measured variable current</li> </ul>	+/- 0,2 %
<ul> <li>for measured variable output factor</li> </ul>	+/- 2 %
<ul> <li>for measured variable active energy</li> </ul>	Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-22
<ul> <li>for measured variable reactive energy</li> </ul>	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> <li>at digital output with signal &lt;0&gt; maximum</li> </ul>	0.2 mA
<ul> <li>at digital output for signal &lt;1&gt; maximum</li> </ul>	27 mA
<ul> <li>at the digital outputs at DC limited to 100 ms maximum</li> </ul>	300 mA
internal resistance at the digital outputs	55 Ω
standard for pulse emitter	according to IEC62053-31
pulse duration	
• initial value	30 ms
● full-scale value	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	
• minimum	11.5 V
• maximum	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	
• minimum	20 V
• maximum	828 V
voltage measuring range extension with external voltage transformers	yes
line conductors and neutral conductors internal resistance	1.05 ΜΩ

for voltage measurement	
measuring category for voltage measurement	CATIII
measurable current	
<ul> <li>1 at AC rated value</li> </ul>	1 A
<ul> <li>2 at AC rated value</li> </ul>	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	
<ul> <li>at the measurement inputs for voltage solid</li> </ul>	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
<ul> <li>at the measurement inputs for voltage finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
<ul> <li>at the measurement inputs for voltage at AWG cables solid</li> </ul>	2x 20 to 14
<ul> <li>at the measurement inputs for current solid</li> </ul>	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
<ul> <li>at the measurement inputs for current finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
• at the measurement inputs for current at AWG cables solid	2x 20 to 14
type of electrical connection	
<ul> <li>at the measurement inputs for voltage</li> </ul>	screw-type terminals
<ul> <li>at the measurement inputs for current</li> </ul>	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
	L CE UK A LANGE LA
other	Dangerous Good

### Environmental Con-**Miscellaneous firmations**

**Confirmation** 

**Dangerous Goods** 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?mlfb=7KM4212-0BA00-3AA0

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

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

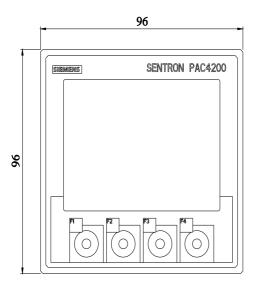
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=7KM4212-0BA00-3AA0

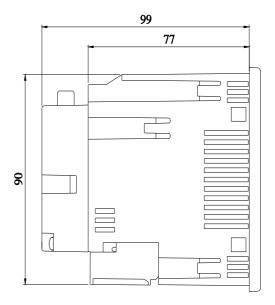
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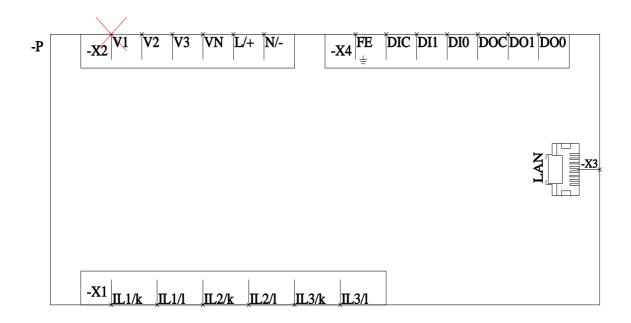
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**Tender specifications** 

http://www.siemens.com/specifications







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