



SETRON PAC4200;  
 LCD;  
 96X96MM POWER MONITORING DEVICE PANEL MOUNT  
 TYPE FOR MEASUREMENT OF ELECTR. VALUES VAUX:  
 110-340VDC / 95-240VAC VIN: MAX.690/400V;  
 45-65HZ AMPIN: X/1A OR X/5A AC COMPRESSION TYPE  
 TERMINALS

Similar to image

**General technical data:**

<b>Product designation</b>		multimeter
<b>product brand name</b>		SETRON
<b>Product-type designation</b>		PAC4200
<b>Size of multimeter / company-specific</b>		size 96
<b>Design of the product</b>		compact
<b>Product function</b>		
• voltage measurement		Yes
• current measurement		Yes
• active power measurement		Yes
• reactive power measurement		Yes
• pulse measurement		Yes
• frequency measurement		Yes
<b>MTBF</b>	a	169.7
<b>Reference code</b>		
• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750		P
• according to DIN EN 61346-2		P

**Measurement:**

<b>Measuring method</b>		TRMS
<ul style="list-style-type: none"> <li>• for voltage measurement</li> <li>• for current measurement</li> </ul>		TRMS
<b>Type of measured value detection</b>		complete
<b>Curve form of the voltage</b>		Sinusoidal or distorted
<b>Measurable line frequency</b>	Hz	45 ... 65
<b>Operating mode for measured value detection</b>		
<ul style="list-style-type: none"> <li>• automatic line frequency detection</li> <li>• set at 50 Hz</li> <li>• set to 60 Hz</li> </ul>		Yes No No

#### Measuring inputs for voltage:

<b>Measurable supply voltage</b>		
<ul style="list-style-type: none"> <li>• between (PE)N and L / for AC / maximum nominal value</li> <li>• between the outer conductors / for AC / maximum nominal value</li> <li>• between (PE)N and L / for AC</li> <li>• between the outer conductors / for AC</li> </ul>	V V V V	400 690 11.5 ... 480 20 ... 828
<b>Supply voltage / between the outer conductors / for AC</b>		
<ul style="list-style-type: none"> <li>• maximum permissible</li> </ul>	V	831
<b>Measuring category / for voltage measurement</b>		CATIII
<b>Outer conductors and neutral conductors internal resistance</b>		
<ul style="list-style-type: none"> <li>• for voltage measurement</li> </ul>	MΩ	1.05
<b>Power consumption / for voltage measurement</b>		
<ul style="list-style-type: none"> <li>• per phase</li> </ul>	mW	220
<b>Measuring range extension for voltages</b>		
<ul style="list-style-type: none"> <li>• with external voltage transformers</li> </ul>		Yes

#### Measuring inputs for current:

<b>Measurable current</b>		
<ul style="list-style-type: none"> <li>• 1 / for AC / nominal value</li> <li>• 2 / for AC / nominal value</li> </ul>	A A	1 5
<b>Relative measurable current / for AC</b>	%	1 ... 120
<b>Continuous current / for AC / maximum permissible</b>	A	10
<b>Apparent power consumption / for current measurement</b>		
<ul style="list-style-type: none"> <li>• with measuring range 1 A / per phase</li> <li>• with measuring range 5 A / per phase</li> </ul>	mVA mVA	4 115
<b>Short-time current resistance (I<sub>cw</sub>) / limited to 1 s / rated value</b>	A	100
<b>Zero-point suppression / for current measurement</b>		0 ... 10 %
<b>Measuring category / for current measurement</b>		CATIII
<b>Measuring range extension for currents</b>		

- with external current transformers

Yes

#### Fault limits:

##### Reference condition / for metering precision

Acc. to IEC61557-12

##### Formula for relative total measurement inaccuracy

- for measured variable voltage
- for measured variable current
- for measured variable output
- for measured variable output factor
- for measured variable THD
- for measured variable active energy
- for measured variable reactive energy

+/- 0,2 %

+/- 0,2 %

+/- 0,5 %

+/- 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

#### Supply voltage:

##### Design of the power supply

Wide-range power supply

##### Type of / supply voltage

AC/DC

##### Relative symmetrical tolerance / of the supply voltage

% 10

##### Measuring category / supply voltage

CATIII

##### Supply voltage / 1 / with AC

V 95 ... 240

##### Supply voltage frequency

- 1 / rated value

Hz 50

- 2 / rated value

Hz 60

##### Apparent power consumption

- without expansion module(s) / typical
- with expansion module(s) / maximum

V·A 11

V·A 32

##### Supply voltage / 1 / for DC

V 110 ... 340

##### Active power consumed

- without expansion module(s) / typical
- with expansion module(s) / typical

W 5.5

W 11

#### Digital input:

##### Number of digital inputs

2

##### Operating conditions for digital inputs / external voltage supply

Yes

##### Input voltage / at the digital input

- for DC / rated value
- for DC / max.
- final value for signal<1>-recognition
- initial value for signal<1>-recognition

V 24

V 30

V 10

V 19

##### Input current / at the digital input

- for signal <1>

mA 4

<b>Initial delay time / at the digital input</b>		
• for signal <1> after <0> / maximum	ms	5
• for signal <0> after <1> / maximum	ms	5

Digital output:		
<b>Number of digital outputs</b>		2
<b>Design of the switching output</b>		solid state
<b>Design of digital outputs</b>		switching or pulse output function
<b>Norm / for impulse equipment</b>		according to IEC62053-31
<b>Pulse duration</b>	ms	30 ... 500
<b>Adjustable time period / minimum</b>	ms	10
<b>Operating voltage / as output voltage / for DC / maximum permissible</b>	V	30
<b>Output current</b>		
• at the digital output		
• for signal <1>	mA	10 ... 27
• at signal <0> / maximum	mA	0.2
• at the digital outputs / for DC / maximum	mA	100
<b>Output current / at the digital outputs / for DC / limited to 100 ms / max.</b>	mA	300
<b>Output delay time / at the digital output</b>		
• for signal <1> after <0> / maximum	ms	5
• for signal after <0> after <1> / maximum	ms	5
<b>Internal resistance / at the digital outputs</b>	Ω	55
<b>Switching frequency / at the digital output / maximum</b>	Hz	20
<b>Characteristic feature of the output / short-circuit protected</b>		Yes
<b>Measuring category / for digital signals</b>		CATI

Communication:		
<b>Number of interfaces / compliant with fast Ethernet</b>		1
<b>Design of the electrical connection</b>		
• of the fast Ethernet interface		RJ45 (8P8C)
<b>Design of cable / connectable</b>		
• Twisted Pair		Yes
<b>Protocol / at the Ethernet interface / is supported</b>		MODBUS TCP
<b>Transfer rate</b>		
• 1 / for Ethernet	Mbit/s	10
• 2 / for Ethernet	Mbit/s	100
<b>Number of active connections</b>		
• at the Ethernet interface		3
<b>Number of ports logical / at the Ethernet interface</b>		
• being supported		2

<b>Product function / at the Ethernet interface</b>		
• autonegotiation		Yes
• auto-MDI(X)		Yes
• serial gateway		Yes
<b>protocol / is supported</b>		MODBUS TCP
<b>Transfer rate</b>	kbit/s	10,000 ... 100,000
<b>Updating time</b>		
• at the interface / for instantaneous values / typical	ms	200

#### Indication and operation:

<b>Number of keys</b>		4
<b>Design of the display</b>		LCD, graphical, monochrome
<b>Color / of the background of the display</b>		white
<b>National language / for the display / is supported</b>		ger, en, fr, spa, ita, por, tur, rus, chi, pol
<b>Horizontal image resolution</b>		128
<b>Vertical screen resolution</b>		96
<b>Width / of the display</b>	mm	72
<b>Height / of the display</b>	mm	54
<b>Updating time / on display</b>	s	0.33 ... 3
<b>Product function</b>		
• display contrast adjustable		Yes
• display can be inverted (positive <=> negative mode)		Yes
• illuminance of the display background lighting adjustable		Yes
• time controlled reduction of the illuminance of the display background lighting possible		Yes
<b>Standby time / for dim out of the display background lighting</b>	min	1 ... 99

#### Connection elements and terminals:

<b>Design of the electrical connection</b>		
• at the measurement inputs for voltage		screw-type terminals
<b>Type of connectable conductor cross section / at the measurement inputs for voltage</b>		
• solid		1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded / with wire end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG conductors / solid		2x 20 to 14
<b>Design of the electrical connection</b>		
• at the measurement inputs for current		screw-type terminals
<b>Type of connectable conductor cross section / at the measurement inputs for current</b>		
• solid		1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded / with wire end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• for AWG conductors / solid</li> </ul>		2x 20 to 14
<b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>• at the inputs for supply voltage</li> </ul>		screw-type terminals
<b>Type of connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• at the inputs for supply voltage <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded / with wire end processing</li> <li>• for AWG conductors / solid</li> </ul> </li> <li>• at the digital inputs / solid</li> </ul>		1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2 (0.5 ... 1.5 mm <sup>2</sup> ) 2x 20 to 14 1x (0.2 ... 2.5 mm <sup>2</sup> ), 2x (0.2 ... 1.0 mm <sup>2</sup> )
<b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>• at the digital inputs</li> </ul>		screw-type terminals
<b>Type of connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• at the digital inputs / finely stranded / with wire end processing</li> <li>• at the digital inputs / for AWG conductors / solid</li> </ul>		1x (0.25 ... 2.5 mm <sup>2</sup> ), 2x (0.25 ... 1.0 mm <sup>2</sup> ) 1x 24 ... 12
<b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>• at the digital outputs</li> </ul>		screw-type terminals
<b>Type of connectable conductor cross section / at the digital outputs</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded / with wire end processing</li> <li>• for AWG conductors / solid</li> </ul>		1x (0.2 ... 2.5 mm <sup>2</sup> ), 2x (0.2 ... 1.0 mm <sup>2</sup> ) 1x (0.25 ... 2.5 mm <sup>2</sup> ), 2x (0.25 ... 1.0 mm <sup>2</sup> ) 1x 24 ... 12

#### Dimensions and weights:

<b>Suitability for installation</b>		Installation in stationary control panels in closed rooms
<b>Mounting type / panel mounting</b>		Yes
<b>mounting position</b>		vertical
<b>Width</b>	mm	96
<b>Height</b>	mm	96
<b>Depth</b>	mm	82
<b>Mounting depth</b>	mm	77
<b>Mounting depth / with expansion module(s) / max.</b>	mm	99
<b>Cutout height</b>	mm	92
<b>Cutout width</b>	mm	92
<b>Material thickness</b> <ul style="list-style-type: none"> <li>• of the control panel</li> </ul>	/ mm	4

#### Degree of protection and safety class:

<b>Operating resource protection class</b> <ul style="list-style-type: none"> <li>• when installed</li> </ul>		II
<b>Protection class IP</b> <ul style="list-style-type: none"> <li>• on the front</li> </ul>		IP65

- rear side

IP20

#### Ambient conditions:

##### Ambient temperature

- during operating
- during storage

°C	-10 ... +55
°C	-25 ... +70

##### Relative humidity / at 25 °C / without condensation

- during the operating phase

%	5 ... 95
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##### Installation altitude / at a height over sea level / maximum

m	2,000
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##### Degree of pollution

2

##### Norm

- for environmental coldness check
- for environmental dry heat check
- for cyclic, environmental damp heat check

IEC 60068-2-1
IEC 60068-2-2
IEC 60068-2-30

#### Certificates/approvals:

##### Verification of suitability

- as EC declaration of conformity
- as authorisation for USA
- as authorisation for Canada
- authorization for Australia
- authorization for Russia

IEC 61010-1: 2001 (2nd Ed.) with Corr. 1, EN 61010-1: 2001 (2nd Ed.) and DIN EN 61010-1:2002 with "Berichtigung 1"
UL 61010-1, 2nd Ed. CAN/CSA-C22.2 NO. 61010-1-04
UL 61010-1, 2nd Ed. CAN/CSA-C22.2 NO. 61010-1-04
Yes
Yes

#### Certificates/approvals:

##### General Product Approval

##### EMC

##### Declaration of Conformity



##### other

[Confirmation](#)



Profibus

[PROFINET-Certification](#)

[other](#)

#### Further information:

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

##### Industry Mall (Online ordering system)

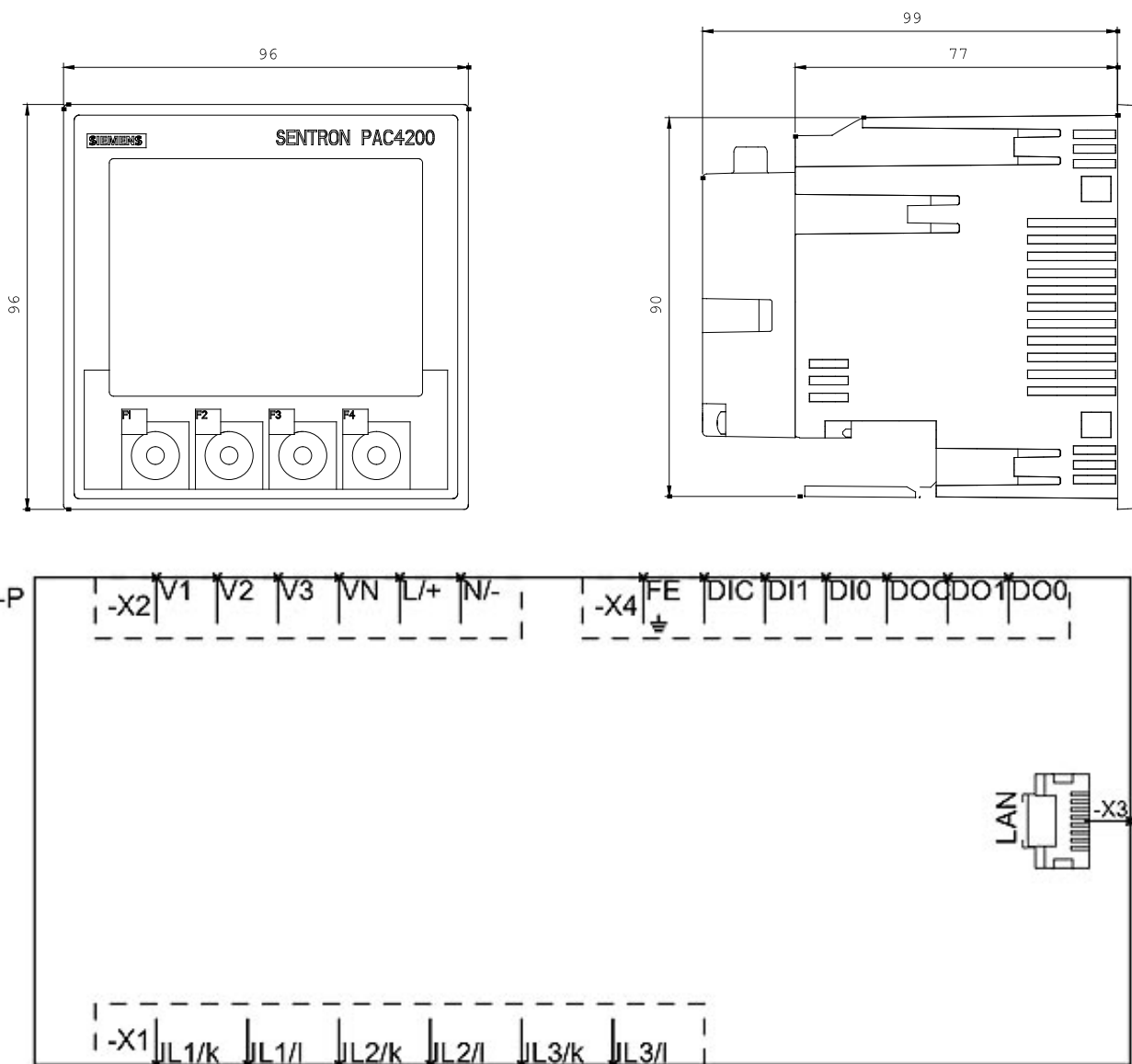
<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/7KM4212-0BA00-3AA0>

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

<http://support.automation.siemens.com/WW/view/en/7KM4212-0BA00-3AA0/all>

Tender specifications

[Datanorm GAEB81](#) [GAEB83](#) [RTF](#) [TXT](#)



last change:

Aug 12,  
2014