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## Data sheet 7KM4212-0BA00-2AA0




SENTRON, measuring device, 7KM PAC4200, LCD, L-L: 690 V, L-N: 400 V, 5 A, 3-phase, Modbus TCP, optionally Modbus RTU / PROFINET / PROFIBUS / DI/DQ, apparent / active / reactive energy / cos phi, harmonics: 2nd - 64th, THD, Class 0.2 acc. to IEC 61557-12 or Class 0.2 s acc. to IEC 62053-22, wide-range power supply 95 to 240 V +-10% (AC), 110 to 340 V +-10% (DC) ring cable lug connection

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|---|---|
| **Model** | |
| **product brand name** | SENTRON |
| **product designation** | Measuring device for power system quality measurement |
| **design of the product** | compact |
| **product type designation** | 7KM PAC4200 |
| **Measurements** | |
| **measuring procedure** | |
| ● for voltage measurement | TRMS |
| ● for current measurement | 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** | II |
| **Suitability** | |
| **suitability for operation** | Installation in stationary panels in closed rooms |
| **Product Functions** | |
| **product function** | |
| ● voltage measurement | Yes |
| ● current measurement | Yes |
| ● active power measurement | Yes |
| ● reactive power measurement | Yes |
| ● frequency measurement | Yes |
| **Display and operation** | |
| **design of the display** | LCD |
| **height of the display** | 54 mm |


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| **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** | |
| **transfer rate minimum** | 10 000 kbit/s |
| **transfer rate maximum** | 100 000 kbit/s |
| **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** | according to IEC61557-12 |
| **formula for relative total measurement inaccuracy** | |
| ● for measured variable voltage | +/- 0.2 % |
| ● for measured variable current | +/- 0.2 % |
| ● for measured variable output factor | +/- 2 % |
| ● for measured variable active energy | Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-22 |
| ● for measured variable reactive energy | Class 2 according to IEC61557-12 and/or IEC62053-23 |
| ● for measured variable THD | +/- 2 % |
| **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** | |
| ● at digital output with signal <0> maximum | 0.2 mA |
| ● at digital output for signal <1> maximum | 27 mA |
| ● at the digital outputs at DC limited to 100 ms maximum | 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** | |


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| ● minimum | 20 V |
| ● maximum | 828 V |
| **voltage measuring range extension with external voltage transformers** | yes |
| **line conductors and neutral conductors internal resistance for voltage measurement** | 1.05 MΩ |
| **measuring category for voltage measurement** | CAT III |
| **measurable current** | |
| ● 1 at AC rated value | 1 A |
| ● 2 at AC rated value | 5 A |
| **relative measurable current at AC** | |
| ● minimum | 10 % |
| ● maximum | 120 % |
| **current measuring range extension with external current transformers** | Yes |
| **zero point suppression for current measurement** | 0 ... 10 % |
| **apparent power consumption for current measurement** | |
| ● with measuring range 1 A per phase | 4 mVA |
| ● with measuring range 5 A per phase | 0.115 V·A |
| **measuring category for current measurement** | CATIII |
| **Connections** | |
| **type of electrical connection** | |
| ● at the measurement inputs for voltage | Ring cable lug connection |
| **Mechanical Design** | |
| **fastening method DIN-rail mounting** | No |
| **size of Power Monitoring Device** | size 96 |
| **height** | 96 mm |
| **width** | 96 mm |
| **depth** | 82 mm |
| **installation depth** | 77 mm |
| **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" |
| **Approvals Certificates** | |
| **General Product Approval** | |

Metrological Approval

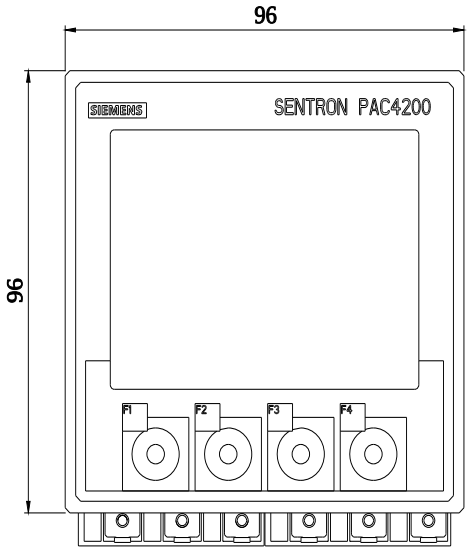
Confirmation

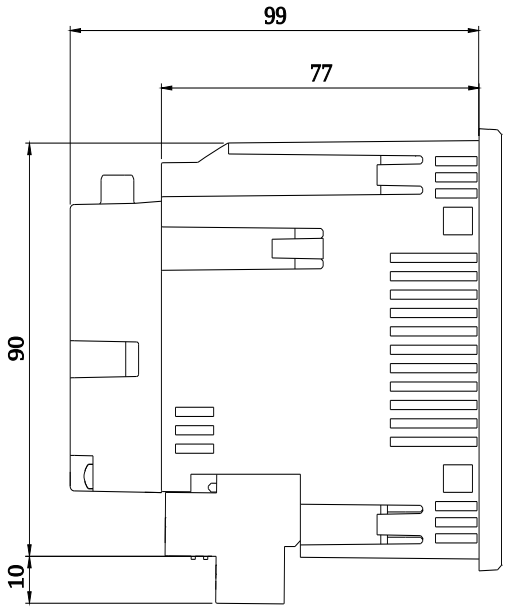
| other | | Dangerous goods | Environment | | |
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| Confirmation | 产品合格 QC PASS | Dangerous goods information | Environmental Confirmations | Environmental Confirmations | Siemens EcoTech |


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## Further information

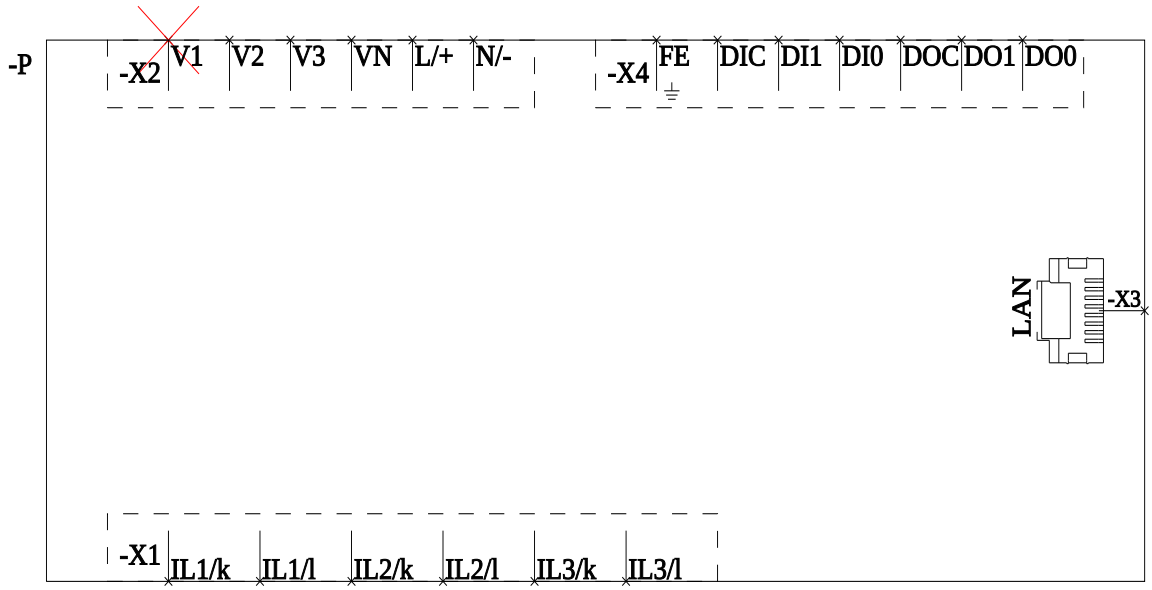
**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**Information for data generation and storage**
https://support.industry.siemens.com/cs/ww/en/view/109995012
**Information- and Downloadcenter (catalogues, leaflets,...)**
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**Industry Mall (Online ordering system)**
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=7KM4212-0BA00-2AA0
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/7KM4212-0BA00-2AA0
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=7KM4212-0BA00-2AA0
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