## SIEMENS

## Data sheet

## 7KM1020-0BA01-1DA0



SENTRON PAC1020 96X96 mm Power Monitoring Device Panel mount type for measurement of electr. values Protocol: Modbus RTU With graphical display Un max: 400/230V 45-65Hz Input current 5A AC Power Supply 85V - 276V AC Terminal blocks

| Model   |   |  |  |
|---|---|--|--|
| product brand name  | SENTRON   |  |  |
| product designation   | multimeter  |  |  |
| design of the product   | basic   |  |  |
| product type designation  | 7KM PAC1020                                       |  |  |
| 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<br>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  | 100 250 V   |  |  |
| supply voltage at DC  | 100 250 V   |  |  |
| Degree of protection protection class   |   |  |  |
| protection class IP on the front  | IP40  |  |  |
| operating resource protection class when installed                                | Ш   |  |  |
| Suitability   |   |  |  |
| suitability for operation   | Installation in stationary panels in closed rooms |  |  |
| Product Functions   |   |  |  |
| product function  |   |  |  |
| <ul> <li>voltage measurement</li> </ul>   | Yes   |  |  |
| current measurement   | 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   | 56 mm   |  |  |
| width of the display  | 74 mm   |  |  |

| color of the background of the display   | white                                       |  |  |
|--|---|--|--|
| color of the background of the display   |   |  |  |
| display contrast adjustable  | Yes   |  |  |
| national language on the display screen is supported   |   |  |  |
| number of keys   | sp, en, cn, pt<br>4                         |  |  |
| Communication  | •   |  |  |
| transfer rate minimum  | 4 800 kbit/s                                |  |  |
| transfer rate maximum  |   |  |  |
| number of interfaces according to Fast Ethernet  | 115 200 kbit/s                              |  |  |
| Fault limits   |   |  |  |
| reference condition for metering accuracy  | according to IEC62053-21                    |  |  |
| formula for relative total measurement inaccuracy  |   |  |  |
| for measured variable voltage  | 0.50%                                       |  |  |
| for measured variable current  | +/- 0,5 %                                   |  |  |
| <ul> <li>for measured variable active power</li> </ul>   | 1%  |  |  |
| for measured variable reactive power   | 2%  |  |  |
| for measured variable reductive power  | 270   |  |  |
| <ul> <li>for measured variable active energy</li> </ul>  | class 1 according to IEC62053-21            |  |  |
| <ul> <li>for measured variable active energy</li> <li>for measured variable reactive energy</li> </ul> | 2%  |  |  |
| Inputs Outputs   | 2 /u  |  |  |
| number of digital inputs   | 1   |  |  |
|  |   |  |  |
| design of the switching input<br>type of electrical connection at the digital inputs                   | electronic, passive<br>screw-type terminals |  |  |
|  | Yes   |  |  |
| operating conditions for digital inputs external voltage supply  | 30 V  |  |  |
| input voltage at digital input at DC maximum   |   |  |  |
| number of digital outputs  |   |  |  |
| type of switching output   | electronic, passive                         |  |  |
| 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   | 120 4                                       |  |  |
| at the digital outputs at DC limited to 100 ms maximum   | 130 mA                                      |  |  |
| internal resistance at the digital outputs   | 55 Ω  |  |  |
| standard for pulse emitter   | according to IEC62053-31                    |  |  |
| pulse duration   | 500 mg                                      |  |  |
| initial value  | 500 ms                                      |  |  |
| full-scale value   | 30 ms                                       |  |  |
| adjustable time period minimum   | 10 ms                                       |  |  |
| switching frequency at digital output maximum  | 17 Hz                                       |  |  |
| property of the output short-circuit proof   | Yes   |  |  |
| Measuring inputs   | 2001/                                       |  |  |
| measurable supply voltage between (PE)N and L at AC maximum rated value                                | 230 V                                       |  |  |
| measurable supply voltage between (PE)N and L at AC  |   |  |  |
| • minimum  | 11.5 V                                      |  |  |
| maximum     measurable supply voltage between the line conductors at AC                                | 280 V<br>400 V                              |  |  |
| woltage measuring range extension with external voltage  | yes   |  |  |
| transformers line conductors and neutral conductors internal resistance for                            | 1.5 ΜΩ                                      |  |  |
| voltage measurement  |   |  |  |
| measuring category for voltage measurement   | CAT III                                     |  |  |
| measurable current   | 1.0   |  |  |
| 1 at AC rated value  |   |  |  |
| • 2 at AC rated value  | 5 A   |  |  |
| relative measurable current at AC  | 40.07                                       |  |  |
| • minimum  | 10 %  |  |  |
| maximum     current measuring range extension with external current                                    | 120 %<br>Yes                                |  |  |
| current measuring range extension with external current transformers                                   |   |  |  |
| zero point suppression for current measurement   | 0 10 %                                      |  |  |

| neasuring category for current measurement   | CATIII               |                                |                         |
|--|----------------------|--------------------------------|-------------------------|
| onnections   |                      |                                |                         |
| ype of electrical connection   |                      |                                |                         |
| <ul> <li>at the measurement inputs for voltage</li> </ul>  | screw-type terminals |                                |                         |
| at the measurement inputs for current  | screw-type terminals |                                |                         |
| echanical Design   |                      |                                |                         |
| astening method standard rail mounting   | No                   |                                |                         |
| size of Power Monitoring Device  | size 96              |                                |                         |
| neight   | 96 mm                |                                |                         |
| vidth  | 96 mm                |                                |                         |
| Jepth  | 42 mm                |                                |                         |
| nstallation depth  | 42 mm                |                                |                         |
| net weight   | 240 g                |                                |                         |
| nounting position  | vertical             |                                |                         |
| vironmental conditions   | Vortiour             |                                |                         |
| ambient temperature during operation   |                      |                                |                         |
| minimum  | -10 °C               |                                |                         |
| • maximum  | 55 °C                |                                |                         |
| ambient temperature during storage   |                      |                                |                         |
| minimum  | -25 °C               |                                |                         |
| • maximum  | 70 °C                |                                |                         |
| elative humidity at 25 °C without condensation during operation naximum  | 75 %                 |                                |                         |
| nstallation altitude at height above sea level maximum   | 2 000 m              |                                |                         |
| degree of pollution  | 2                    |                                |                         |
| ertificates  |                      |                                |                         |
| certificate of suitability as EC Declaration of Conformity   | yes                  |                                |                         |
|  | of Conformity        | other                          |                         |
|  |                      |                                |                         |
| Confirmation ERI UK  | EG-Konf.             | <u>Confirmation</u>            | <u>Miscellaneous</u>    |
| Environment  |                      |                                |                         |
| Environmental Con-<br>firmations   |                      |                                |                         |
| irther information   |                      |                                |                         |
| Siemens has decided to exit the Russian market (see here).   |                      |                                |                         |
| https://press.siemens.com/global/en/pressrelease/siemens-wind-   |                      |                                |                         |
| Siemens is working on the renewal of the current EAC certifi<br>Please contact your local Siemens office on the status of validity |                      | end to import or offer to supp | bly these products to a |

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=7KM1020-0BA01-1DA0

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

https://support.industry.siemens.com/cs/ww/en/ps/7KM1020-0BA01-1DA0

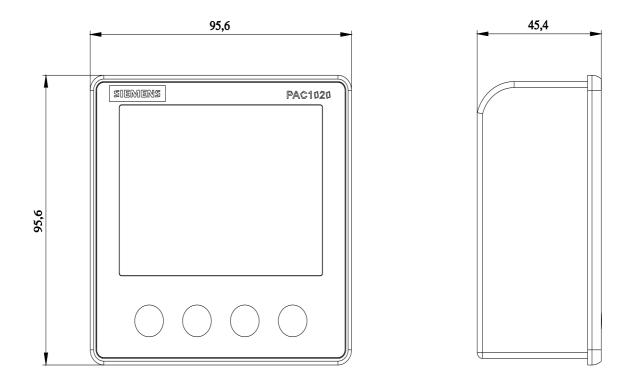
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=7KM1020-0BA01-1DA0

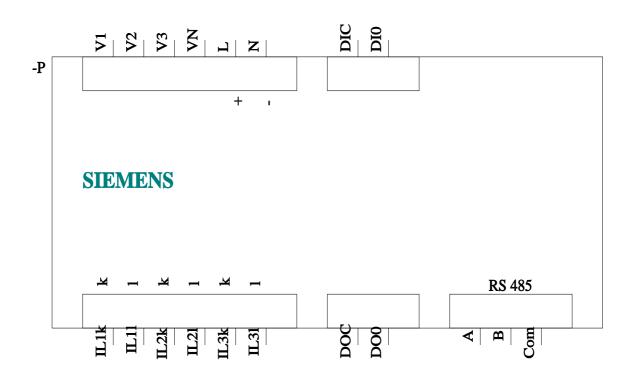
CAx-Online-Generator

http://www.siemens.com/cax

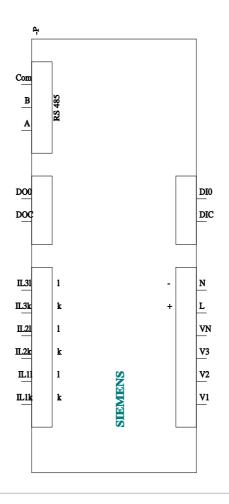
Tender specifications

http://www.siemens.com/specifications





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