



SETRON PAC3220 LCD 96X96 mm Power Monitoring Device Controll panel instrument for electrical values protocol: Modbus TCP with graphics display U rated input: 690/400V 45-65Hz IE rated input: X/1A oder X/5A AC Power supply: 100 ... 250 V +-10 % AC/DC screw connections

| Model  |   |
|--|---|
| product brand name   | SETRON  |
| product designation  | multimeter  |
| design of the product  | basic   |
| product type designation   | 7KM PAC3220                                       |
| 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   | 100 ... 250 V                                     |
| supply voltage at DC   | 100 ... 250 V                                     |
| Degree of protection protection class  |   |
| protection class IP on the front   | IP65  |
| 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   |
| width of the display   | 72 mm   |
| color of the background of the display   | white   |

|  |   |
|--|---|
| illuminance of display backlight adjustable  | No  |
| time-controlled reduction of the illuminance of display backlight possible         | Yes   |
| display contrast adjustable  | Yes   |
| national language on the display screen is supported                               | de, en, fr, spa, ita, por, tur, chi, pol                    |
| number of keys   | 4   |
| <b>Communication</b>   |   |
| transfer rate minimum  | 10 000 kbit/s   |
| transfer rate maximum  | 100 000 kbit/s  |
| number of interfaces according to Fast Ethernet                                    | 2   |
| type of electrical connection of the fast Ethernet interface                       | 2 x RJ45  |
| protocol at the Ethernet interface is supported                                    | MODBUS TCP  |
| <b>Fault limits</b>  |   |
| reference condition for metering accuracy  | In accordance with IEC61557-12, IEC62053-22 and IEC62053-23 |
| formula for relative total measurement inaccuracy                                  |   |
| • for measured variable voltage  | +/- 0.2 %   |
| • for measured variable current  | +/- 0.2 %   |
| • for measured variable active power   | +/- 0.5 %   |
| • for measured variable reactive power   | +/- 1 %   |
| • for measured variable output factor  | +/- 0.5 %   |
| • for measured variable active energy  | Cl. 0.5 acc. to... IEC62053-22                              |
| • for measured variable reactive energy  | Class 2 according to IEC61557-12 and/or IEC62053-23         |
| <b>Inputs Outputs</b>  |   |
| 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  |
| input current at digital input   |   |
| • initial value for signal<1>-recognition  | 7 mA  |
| number of digital outputs  | 2   |
| type of switching output   | bidirectional   |
| 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 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   |   |
| • initial value  | 30 ms   |
| • full-scale value   | 500 ms  |
| adjustable time period minimum   | 10 ms   |
| switching frequency at digital output maximum                                      | 17 Hz   |
| property of the output short-circuit proof   | Yes   |
| <b>Measuring inputs</b>  |   |
| 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   |
| voltage measuring range extension with external voltage transformers               | yes   |
| line conductors and neutral conductors internal resistance for voltage measurement | 1.5 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  | 1 %   |

|  |            |
|--|------------|
| • maximum  | 100 %      |
| 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 5 A per phase                                 | 0.3 VA     |
| measuring category for current measurement                           | CATIII     |

#### Connections

|   |                      |
|---|----------------------|
| 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                                   | 56 mm    |
| installation depth                      | 51 mm    |
| net weight                              | 325 g    |
| mounting position                       | vertical |

#### Environmental conditions

|  |         |
|--|---------|
| ambient temperature during operation                                     |         |
| • minimum  | -25 °C  |
| • maximum  | 55 °C   |
| ambient temperature during storage                                       |         |
| • minimum  | -25 °C  |
| • maximum  | 70 °C   |
| relative humidity at 25 °C without condensation during operation maximum | 75 %    |
| installation altitude at height above sea level maximum                  | 2 000 m |
| degree of pollution  | 2       |

#### Certificates

|  |     |
|--|-----|
| certificate of suitability as EC Declaration of Conformity | yes |
|--|-----|

#### Approvals Certificates

##### General Product Approval



[Confirmation](#)



EG-Konf.



[KC](#)



| EMV | Test Certificates | other | Environment |
|-----|-------------------|-------|-------------|
|-----|-------------------|-------|-------------|



RCM



UL

[Miscellaneous](#)

[Confirmation](#)



[Environmental Confirmations](#)

#### Environment

[Environmental Confirmations](#)

#### Further information

##### Information on the packaging

<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=7KM3220-0BA01-1DA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/7KM3220-0BA01-1DA0>

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

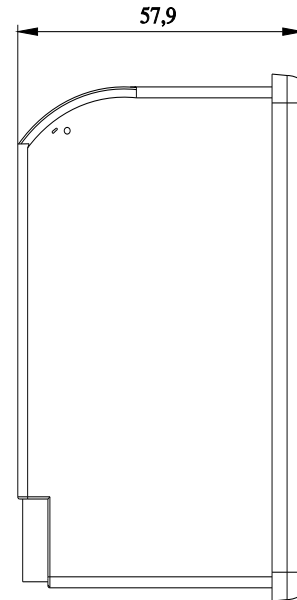
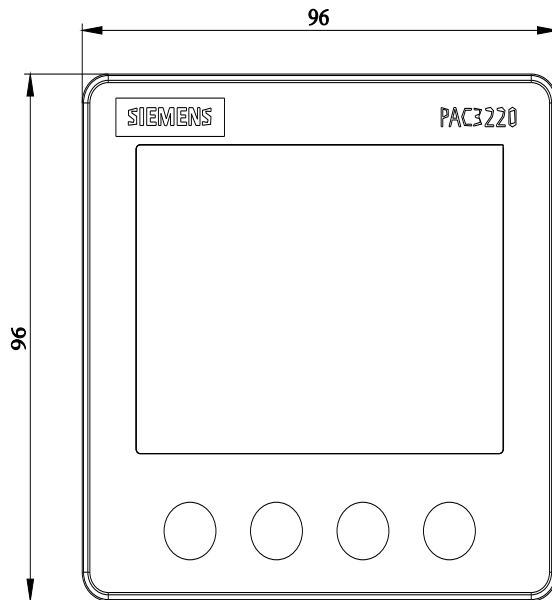
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=7KM3220-0BA01-1DA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=7KM3220-0BA01-1DA0)

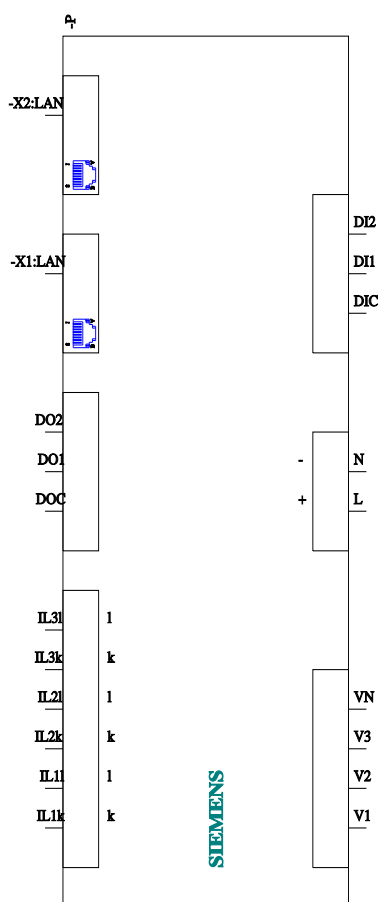
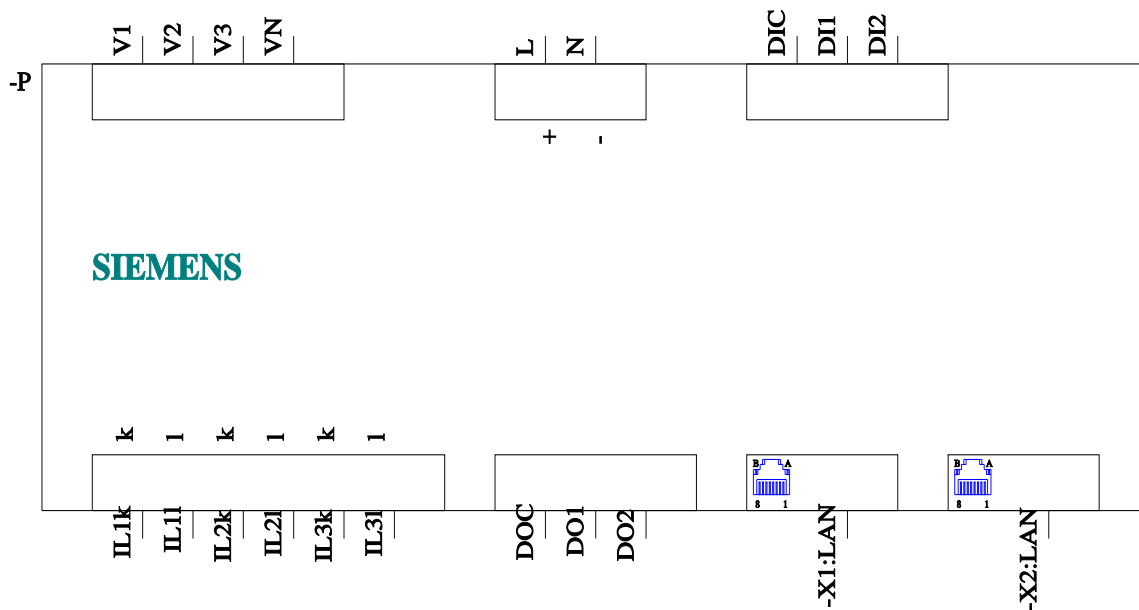
CAX-Online-Generator

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

Tender specifications

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





last modified:

3/12/2024

