## **SIEMENS**

Data sheet 7KT0311



Power Monitoring Device Panel instrument for std electrical values Protocol: Modbus RTU LCD display Vaux: 95V to 240V AC x/1 or 5 A, Class 0.5

| Measurements   |   |
|--|---|
| measuring procedure  |   |
| · · · · · · · · · · · · · · · · · · ·  | True RMS  |
| <ul> <li>for voltage measurement</li> <li>for current measurement</li> </ul>   | True RMS  |
|  |   |
| type of measured value detection   | complete Sinusoidal or distorted                  |
| voltage curve  | Siliusolual of distorted                          |
| measurable line frequency  • initial value                                     | 45 Hz   |
| full-scale value   | 45 Hz   |
| operating mode for measured value detection automatic line frequency detection | Yes   |
| Supply voltage   |   |
| design of the power supply   | SMPS power supply                                 |
| type of voltage of the supply voltage  | AC  |
| Degree of protection protection class  |   |
| protection class IP on the front   | IP65  |
| protection class IP of the terminal  | IP20  |
| 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>power factor measurement</li> </ul>                                   | Yes   |
| <ul> <li>frequency measurement</li> </ul>                                      | Yes   |
| <ul> <li>apparent energy/active energy/reactive energy</li> </ul>              | Yes   |
| Display and operation  |   |
| design of the display  | LCD   |
| height of the display  | 60 mm   |
| width of the display   | 60 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  | No  |
| national language on the display screen is supported                           | EN  |
| number of keys   | 4   |
| Communication  |   |

| transfer rate minimum   | 0.3 kbit/s   |
|---|--|
| transfer rate maximum   | 19.2 kbit/s  |
| Fault limits  |  |
| reference condition for metering accuracy   | according to IEC61557-12, IEC62053-21, IEC62053-23 |
| formula for relative total measurement inaccuracy                                     | 2000. ag to 1200 1007 12, 12002000 21, 12002000-20 |
| for measured variable voltage   | Class 0.5 acc. to IEC 61557-12                     |
| for measured variable current   | Class 0.5 acc. to IEC 61557-12                     |
| for measured variable apparent power  | Class 1 as per IEC 61557-12                        |
| for measured variable active power  | Class 1 acc. to IEC 61557-12                       |
| for measured variable reactive power  | Class 2 as per IEC 61557-12                        |
| for measured variable output factor   | Class 1 as per IEC 61557-12                        |
| for measured variable active energy   | Class 0.5 acc. to IEC 61557-12 and IEC 62053-21    |
| for measured variable reactive energy   | Class 2 as per IEC 61557-12 and IEC 62053-21       |
| for measured variable THD   | Class 3 as per IEC 61557-12                        |
| Inputs Outputs  | Class 3 as per IEC 01337-12                        |
|   | 1  |
| number of digital inputs  |  |
| 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                | 10 mA  |
| number of digital outputs   | 1  |
| type of switching output  | Unidirectional                                     |
| 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   | 100 ms   |
| full-scale value  | 2 000 ms   |
| adjustable time period minimum  | 100 ms   |
| switching frequency at digital output maximum   | 17 Hz  |
| Measuring inputs  |  |
| measurable supply voltage between (PE)N and L at AC maximum rated value               | 240 V  |
| measurable supply voltage between (PE)N and L at AC                                   |  |
| • minimum   | 11 V   |
| maximum   | 300 V  |
| measurable supply voltage between the line conductors at AC maximum rated value       | 415 V  |
| measurable supply voltage between the line conductors at AC                           |  |
| • minimum   | 19 V   |
| maximum   | 519 V  |
| voltage measuring range extension with external voltage transformers                  | Yes  |
| line conductors and neutral conductors internal resistance for voltage measurement    | 1.12 ΜΩ  |
| 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   | 120 %  |
| current measuring range extension with external current transformers                  | Yes  |
| apparent power consumption for current measurement with measuring range 5 A per phase | 3 VA   |
| measuring category for current measurement  | CAT III  |
|   |  |
| Connections   |  |

| at the measurement inputs for voltage                                    | screw-type terminals |
|--|----------------------|
| at the measurement inputs for current                                    | screw-type terminals |
| Mechanical Design  |                      |
| fastening method DIN-rail mounting                                       | No                   |
| size of Power Monitoring Device  | size 96              |
| height   | 96 mm                |
| width  | 96 mm                |
| depth  | 57 mm                |
| installation depth   | 52.3 mm              |
| cutout height  | 92 mm                |
| cutout width   | 92 mm                |
| net weight   | 3 250 g              |
| mounting position  | Vertical             |
| Environmental conditions   |                      |
| ambient temperature during operation                                     |                      |
| • minimum  | -10 °C               |
| • maximum  | 55 °C                |
| ambient temperature during storage                                       |                      |
| • minimum  | -20 °C               |
| • maximum  | 75 °C                |
| relative humidity at 25 °C without condensation during operation maximum | 85 %                 |
| installation altitude at height above sea level maximum                  | 2 000 m              |
| degree of pollution  | 2                    |
| Approvals Certificates   |                      |
| General Product Approval other   | Environment          |



proval



Confirmation

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=7KT0311

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

https://support.industry.siemens.com/cs/ww/en/ps/7KT0311

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

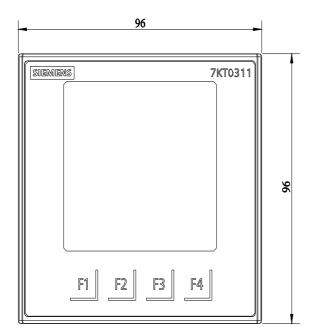
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=7KT0311

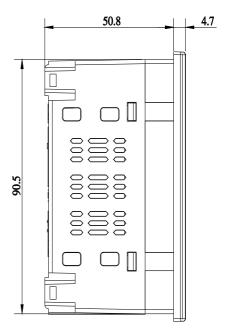
**CAx-Online-Generator** 

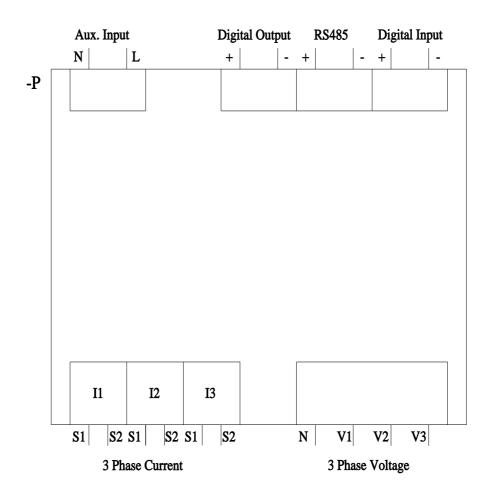
http://www.siemens.com/cax

**Tender specifications** 

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| 7KT0 | 311 |
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| Page | 6/6 |