SIEMENS

Data sheet 7KM3220-0BA01-1DA0

Figure similar

SENTRON 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	SENTRON
Design of the product	basic
Product type designation	Measuring instrument
Type of measured value detection	complete
Design of the power supply	Wide-range power supply

General technical data	
Cutout width	92 mm
Cutout height	92 mm
Size of Power Monitoring Device / company-specific	size 96
Operating mode for measured value detection	
• automatic line frequency detection	Yes
• set at 50 Hz	No
• set to 60 Hz	No
Pulse duration	
• initial value	30 ms
• Full-scale value	500 ms

Voltage curve	Sinusoidal or distorted
Measurable line frequency / initial value	45 Hz
Measurable line frequency / Full-scale value	65 Hz
Measuring procedure / for voltage measurement	TRMS

Supply voltage

Type of voltage / of the supply voltage	AC/DC
Measuring category / for supply voltage	CATIII
Apparent power consumption	
• without expansion module / typical	8 V·A

Protection class

Protection class IP	
• on the front	IP65
• Rear side	IP20

Current

Measurable current	
• 1 / at AC / Rated value	1 A
• 2 / at AC / Rated value	5 A

Suitability

Suitability for operation	Installation in stationary control panels in closed rooms
Adjustable time period / minimum	10 ms

Product function

Product function	
• Illuminance of display backlighting adjustable	No
• Time-controlled reduction of the illuminance of display backlighting possible	Yes
• reactive power measurement	Yes
• frequency measurement	Yes
• pulse measurement	Yes
• Display contrast adjustable	Yes
• voltage measurement	Yes
• Current measurement	Yes
• active power measurement	Yes

Display and operation

Design of the display	LCD
Number of keys	4
Color / of the background of the display	white
Product function / Display can be inverted (positive <=> negative mode)	Yes
Horizontal image resolution	128
Vertical screen resolution	96

Communication	
Number of active connections / at the Ethernet interface	3
Number of interfaces / acc. to Fast Ethernet	2
Protocol	
• at the Ethernet interface / is supported	MODBUS TCP
• is supported	Modbus TCP
Transfer rate	
• minimum	10 000 kbit/s
• maximum	100 000 kbit/s

Fault limits	
Reference condition / for metering accuracy	In accordance with IEC61557-12, IEC62053-22 and IEC62053-23
Formula for relative total measurement inaccuracy	
• for measured variable reactive energy	Class 2 according to IEC61557-12 and/or IEC62053-23
• for measured variable output	+/- 0,5 %
• for measured variable output factor	+/- 0,5 %
• for measured variable voltage	+/- 0,2 %
• for measured variable current	+/- 0,2 %
• for measured variable active energy	Cl. 0.5 acc. to... IEC62053-22

Inputs Outputs	
Input voltage / at digital input	
• at DC / maximum	30 V
Number of digital outputs	2
Number of digital inputs	2
Digital output version	switching or pulse output function
Type of switching output	bidirectional
Type of electrical connection	
• at the digital inputs	screw-type terminals
• at the digital outputs	screw-type terminals
Input current / at digital input	
• initial value for signal<1>-recognition	7 mA
Output current	
• at the digital outputs / at DC / limited to 100 ms / maximum	130 mA
Operating conditions for digital inputs / external voltage supply	Yes
Operating voltage / as output voltage / at DC / maximum permissible	30 V
Property of the output / Short-circuit proof	Yes
Internal resistance / at the digital outputs	55 Ω
Switching frequency / at digital output / maximum	17 Hz

Measuring inputs

Outer conductors and neutral conductors internal resistance / for voltage measurement	1.5 MΩ
Measurable supply voltage	
• between (PE)N and L / at AC / minimum	11.5 V
• between (PE)N and L / at AC / maximum	480 V
• between (PE)N and L / at AC / maximum rated value	400 V
• between the outer conductors / at AC / maximum rated value	690 V
Voltage measuring range extension / with external voltage transformers	Yes
Current measuring range extension / with external current transformers	Yes
Measuring category / for voltage measurement	CATIII
Supply voltage / between the outer conductors / at AC / maximum permissible	831 V
Continuous current / at AC / maximum permissible	10 A
Measuring category / for current measurement	CATIII
Zero-point suppression / for current measurement	0 ... 10 %
Relative measurable current / at AC	
• minimum	1 %
• maximum	100 %
Apparent power consumption / for current measurement	
• with measuring range 5 A / per phase	0.3 V·A
Measuring procedure / for current measurement	TRMS

Connections

Type of electrical connection	
• at the inputs for supply voltage	screw-type terminals
• at the measurement inputs for voltage	screw-type terminals
• at the measurement inputs for current	screw-type terminals

Mechanical Design

Height	96 mm
Height / of the display	54 mm
Width	96 mm
Width	
• of the display	72 mm
Depth	56 mm
Installation depth	51 mm
Mounting type / panel mounting	Yes
Mounting position	vertical
Material thickness / of the control panel	
• maximum	4 mm

Net weight	325 g

Environmental conditions

Installation altitude / at height above sea level / maximum	2 000 m
Standard	
• for pulse emitter	according to IEC62053-31
Ambient temperature / during operation	
• minimum	-25 °C
• maximum	55 °C
Ambient temperature / during storage	
• minimum	-25 °C
• maximum	70 °C

Certificates

Certificate of suitability	
• Approval Australia	Yes

Declaration of Conformity	other		
EG-Konf.	Manufacturer Declaration	PROFINET-Certification	Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/lowvoltage/catalogs

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

CAx-Online-Generator
http://www.siemens.com/cax

Tender specifications
http://www.siemens.com/specifications