SIEMENS

Data sheet 7KM3120-0BA01-1DA0

SENTRON PAC3120 LCD 96X96 mm Power Monitoring Device Controll panel instrument for electrical values protocol: Modbus RTU 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
Product designation	7KM PAC3120
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
National language / on the display screen / is supported	de, en, fr, spa, ita, por, tur, chi, pol
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
Protocol	
• is supported	Modbus RTU
Transfer rate	
• minimum	4.8 kbit/s
• maximum	115.2 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 reactive power	+/- 1 %
• 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
• for measured variable active power	+/- 0.5 %

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
Relative humidity / at 25 °C / without condensation / during operation	
• maximum	75 %
Ambient temperature / during operation	
• minimum	-25 °C
• maximum	55 °C
Ambient temperature / during storage	
• minimum	-25 °C
• maximum	70 °C

Certificates

Certificate of suitability	
• as approval for Canada	Yes
• as approval for USA	Yes
• Approval Australia	Yes

Declaration of Conformity	other
CE EG-Konf.	Manufacturer Declaration

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=7KM3120-0BA01-1DA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/7KM3120-0BA01-1DA0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=7KM3120-0BA01-1DA0

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

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