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
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	IP40
operating resource protection class when installed	II
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	56 mm
width of the display	74 mm

color of the background of the display	white
illuminance of display backlight adjustable	Yes
display contrast adjustable	Yes
national language on the display screen is supported	sp, en, cn, pt
number of keys	4
Communication	
number of interfaces according to Fast Ethernet	1
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 %
● for measured variable active power	1%
● for measured variable reactive power	2%
● for measured variable output factor	0.50%
● for measured variable active energy	class 1 according to IEC62053-21
● for measured variable reactive energy	2%
Inputs Outputs	
number of digital inputs	1
design of the switching input	electronic, passive
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
number of digital outputs	1
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	
● 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	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	
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	280 V
measurable supply voltage between the line conductors at AC maximum rated value	400 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	CATIII
measurable current	
● 1 at AC rated value	1 A
● 2 at AC rated value	5 A
relative measurable current at AC	
● minimum	10 %
● maximum	120 %
current measuring range extension with external current	Yes

transformers	
zero point suppression for current measurement	0 ... 10 %
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	42 mm
installation depth	42 mm
net weight	240 g
mounting position	vertical
Environmental conditions	
ambient temperature during operation	
● minimum	-10 °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

General Product Approval	Declaration of Conformity	other	
Confirmation		Miscellaneous	Environmental Confirmations

Further information

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