SIEMENS

Data sheet 7KM3133-0BA00-3AA0



SENTRON, measuring device, 7KM PAC3100, LCD, L-L: 480 V, L-N: 277 V, 3-phase, Modbus RTU, active/reactive energy, class 1 acc. to IEC 61557-12 & 62053- 21, wide-range power sup. unit AC/DC, screw terminals

Model	
product brand name	SENTRON
product designation	7KM PAC3100
design of the product	basic
product type designation	Measuring instrument

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

Subject to change without notice
© Copyright Siemens

• 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

Degree of protection protection class	
protection class IP on the front	IP65
operating resource protection class when installed	II

Suitability	
suitability for operation	Installation in stationary control panels in closed rooms

Product Functions	
product function	
• voltage measurement	Yes
• current measurement	Yes
• active power measurement	Yes
• reactive power 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	ger, en, fr, spa, ita, por, tur, chi
number of keys	4

Fault limits	
reference condition for metering accuracy	according to IEC61557-12 (K55)
formula for relative total measurement inaccuracy	
• for measured variable voltage	+/- 1.0 %
• for measured variable current	+/- 1.0 %
• for measured variable active power	+/- 1 %
• for measured variable reactive power	+/- 3 %
• for measured variable output factor	+/- 1 %
• for measured variable active energy	Class 1 according to IEC 61557-12 and IEC62053-21
• for measured variable reactive energy	Class 3 according to IEC61557-12 and IEC62053-23

Inputs Outputs	
number of digital inputs	2
design of the switching input	Self-supplied
type of electrical connection at the digital inputs	screw-type terminals

Subject to change without notice
© Copyright Siemens

operating conditions for digital inputs external voltage supply	No
input voltage at digital input at DC maximum	30 V
input current at digital input	
• initial value for signal<1>-recognition	2.5 mA
• full-scale value for signal<0> recognition	0.5 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 digital output with signal <0> maximum	0.2 mA
• at digital output for signal <1> maximum	27 mA
• 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
measuring category for digital signals	CATI

Measuring inputs	
measurable supply voltage between (PE)N and L at AC maximum rated value	277 V
measurable supply voltage between (PE)N and L at AC	
• minimum	11.5 V
• maximum	277 V
measurable supply voltage between the line conductors at AC maximum rated value	480 V
measurable supply voltage between the line conductors at AC	
• minimum	20 V
• maximum	480 V
voltage measuring range extension with external voltage transformers	Yes
line conductors and neutral conductors internal resistance for voltage measurement	0.84 MΩ
measuring category for voltage measurement	CATIII

© Copyright Siemens

measurable current	
• 1 at AC rated value	5 A
relative measurable current at AC	
• minimum	0.2 %
• maximum	120 %
continuous current at AC maximum permissible	10 A
current measuring range extension with external current transformers	Yes
zero point suppression for current measurement	10 mA
• for neutral conductor current	45 mA
measuring category for current measurement	CATIII

Connections

type of connectable conductor cross-sections	
• at the measurement inputs for voltage solid	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
• at the measurement inputs for voltage finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• at the measurement inputs for voltage at AWG cables solid	2x 20 to 14
• at the measurement inputs for current solid	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
• at the measurement inputs for current finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• at the measurement inputs for current at AWG cables solid	2x 20 to 14
type of electrical connection	
• at the measurement inputs for voltage	screw-type terminals
• at the measurement inputs for current	screw-type terminals

Mechanical Design

size of Power Monitoring Device	size 96
height	96 mm
width	96 mm
depth	56 mm
installation depth	51 mm
net weight	469 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

Subject to change without notice
© Copyright Siemens

relative humidity at 25 °C without condensation during operation maximum	95 %
installation altitude at height above sea level maximum	2 000 m
degree of pollution	2

Certificates

certificate of suitability as EC Declaration of Conformity	IEC 61010-1: 2001 (2nd Ed.) with Corr. 1, EN 61010-1: 2001 (2nd Ed.) and DIN EN 61010-1:2002 with "Berichtigung 1"
reference code • acc. to DIN EN 61346-2	 P

General Product Approval	Declaration of Conformity	other	
UL	EG-Konf.	Confirmation	Manufacturer Declaration

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=7KM3133-0BA00-3AA0

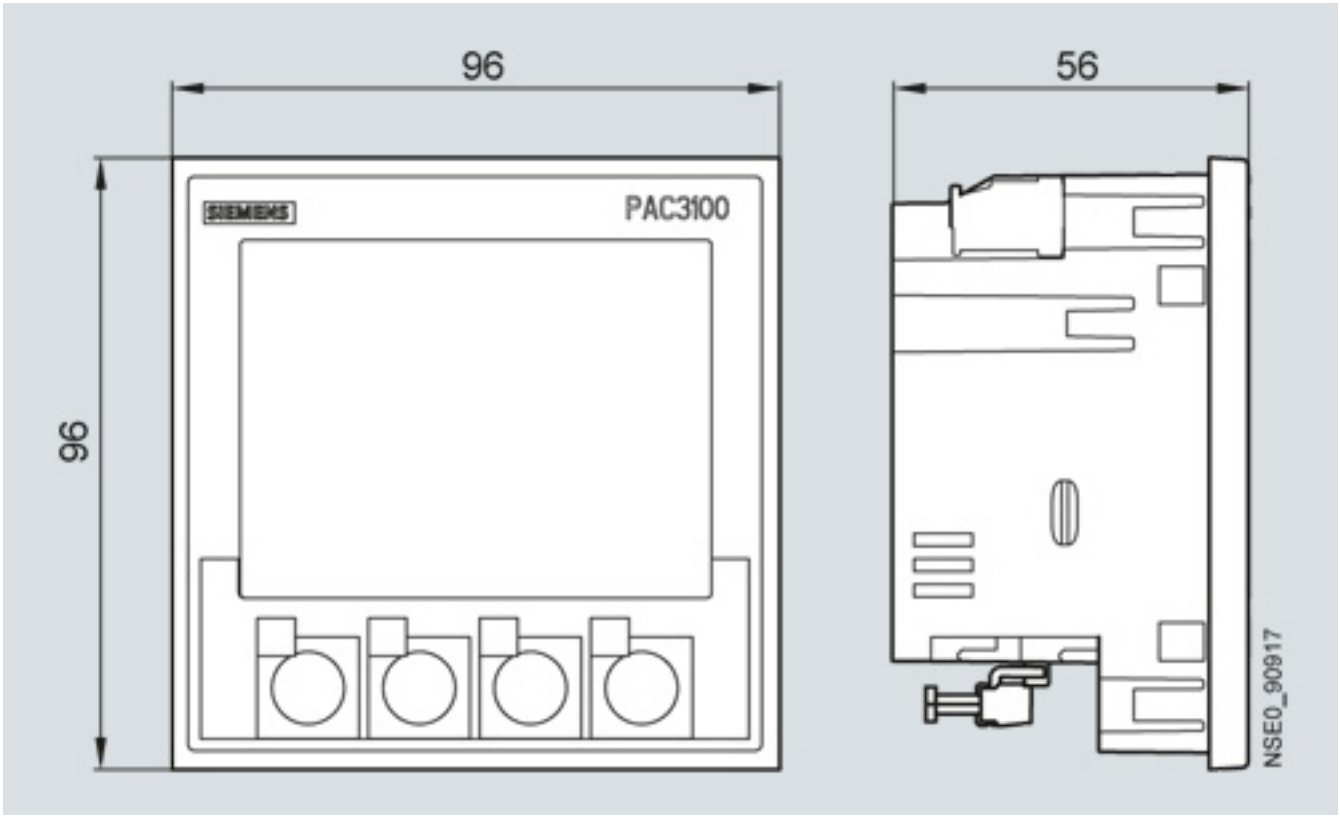
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/7KM3133-0BA00-3AA0

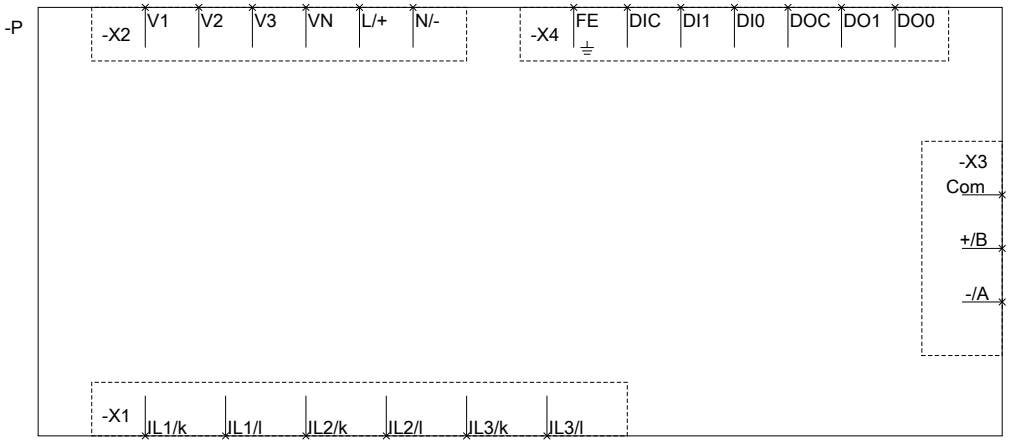
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=7KM3133-0BA00-3AA0

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

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

Subject to change without notice
© Copyright Siemens





© Copyright Siemens

Subject to change without notice
© Copyright Siemens