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Product data sheet 7KM3133-0BA00-3AA0

Similar to image

SENTRON PAC3100;
LCD;
96X96MM POWER MONITORING DEVICE PANEL MOUNT TYPE FOR MEASUREMENT OF ELECTR. VALUES UC: 110-250VDC / 100-240VAC UE: MAX.480/277V;
45-65HZ IE: X/5A AC TERMINAL CONNECTION

General technical data:		
Product designation		multimeter
product brand name		SENTRON
Product-type designation		PAC3100
Size of multimeter / company-specific		size 96
Design of the product		basic
Product function		
• voltage measurement		Yes
• current measurement		Yes
• active power measurement		Yes
• reactive power measurement		Yes
• pulse measurement		No
• frequency measurement		Yes
MTBF	a	95
Reference code		
• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750		P
• according to DIN EN 61346-2		P

Measurement:

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Measuring methode		
• for voltage measurement		TRMS
• for current measurement		TRMS
Type of measured value detection		complete
Curve form of the voltage		Sinusoidal or distorted
Measurable line frequency	Hz	45 … 65
Operating mode for measured value detection		
• automatic line frequency detection		Yes
• set at 50 Hz		No
• set to 60 Hz		No

Measuring inputs for voltage:

Measurable supply voltage		
• between (PE)N and L / for AC / maximum nominal value	V	277
• between the outer conductors / for AC / maximum nominal value	V	480
• between (PE)N and L / for AC	V	11.5 … 332.4
• between the outer conductors / for AC	V	20 … 576
Supply voltage / between the outer conductors / for AC		
• maximum permissible	V	576
Measuring category / for voltage measurement		CATIII
Outer conductors and neutral conductors internal resistance		
• for voltage measurement	MΩ	0.84
Power consumption / for voltage measurement		
• per phase	mW	131.2
Measuring range extension for voltages		
• with external voltage transformers		Yes

Measuring inputs for current:

Measurable current		
• 1 / for AC / nominal value	A	5
Relative measurable current / for AC	%	0.2 … 120
Continuous current / for AC / maximum permissible	A	10
Apparent power consumption / for current measurement		
• with measuring range 5 A / per phase	mVA	500
Short-time current resistance (Icw) / limited to 1 s / rated value	A	100
Zero-point suppression / for current measurement		10 mA
• for neutral conductor current		45 mA
Measuring category / for current measurement		CATIII
Measuring range extension for currents		
• with external current transformers		Yes

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Fault limits:		
Reference condition / for metering precision		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 output		+/- 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

Supply voltage:		
Design of the power supply		Wide-range power supply
Type of / supply voltage		AC/DC
Relative symmetrical tolerance / of the supply voltage	%	10
Measuring category / supply voltage		CATIII
Supply voltage / 1 / with AC	V	100 … 240
Supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Apparent power consumption		
• without expansion module(s) / typical	V·A	10
Supply voltage / 1 / for DC	V	110 … 250

Digital input:		
Number of digital inputs		2
Design of the switching input		Self-supplied
Operating conditions for digital inputs / external voltage supply		No
Input voltage / at the digital input		
• for DC / max.	V	30
Input current / at the digital input		
• final value for signal<0>-recognition	mA	0.5
• initial value for signal<1>-recognition	mA	2.5
Load impedance / at the digital input		
• initial value for signal<0> detection	Ω	100,000
• final value for signal<1> detection	Ω	1,000
Input current / at the digital input / for signal <1> / minimum	mA	2.5
Initial delay time / at the digital input		
• for signal <1> after <0> / maximum	ms	30

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• for signal <0> after <1> / maximum	ms	30

Digital output:		
Number of digital outputs		2
Design of the switching output		bidirectional
Design of digital outputs		switching or pulse output function
Norm / for impulse equipment		according to IEC62053-31
Pulse duration	ms	30 … 500
Adjustable time period / minimum	ms	10
Operating voltage / as output voltage / for DC / maximum permissible	V	30
Output current		
• at the digital output		
• for signal <1>	mA	10 … 27
• at signal <0> / maximum	mA	0.2
• at the digital outputs / for DC / maximum	mA	30
Output current / at the digital outputs / for DC / limited to 100 ms / max.	mA	130
Output delay time / at the digital output		
• for signal <1> after <0> / maximum	ms	5
• for signal after <0> after <1> / maximum	ms	5
Internal resistance / at the digital outputs	Ω	55
Switching frequency / at the digital output / maximum	Hz	17
Characteristic feature of the output / short-circuit protected		Yes
Measuring category / for digital signals		CATI

Communication:		
Number of interfaces / compliant with fast Ethernet		0
protocol / is supported		MODBUS RTU
Transfer rate	kbit/s	4.8 … 38.4

Indication and operation:		
Number of keys		4
Design of the display		LCD, graphical, monochrome
Color / of the background of the display		white
National language / for the display / is supported		ger, en, fr, spa, ita, por, tur, chi
Horizontal image resolution		128
Vertical screen resolution		96
Width / of the display	mm	72
Height / of the display	mm	54
Updating time / on display	s	0.33 … 3
Product function		

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• display contrast adjustable		Yes
• display can be inverted (positive <=> negative mode)		Yes
• illuminance of the display background lighting adjustable		No
• time controlled reduction of the illuminance of the display background lighting possible		Yes
Standby time / for dim out of the display background lighting	min	1 … 99

Connection elements and terminals:

Design of the electrical connection		
• at the measurement inputs for voltage		screw-type terminals
Type of connectable conductor cross section / at the measurement inputs for voltage		
• solid		1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded / with wire end processing		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• for AWG conductors / solid		2x 20 to 14
Design of the electrical connection		
• at the measurement inputs for current		screw-type terminals
Type of connectable conductor cross section / at the measurement inputs for current		
• solid		1x (0.5 ... 4 mm2), 2x (0.5 ... 2.5 mm2)
• finely stranded / with wire end processing		1x (0.5 ... 2.5 mm2), 2x (0.5 ... 1.5 mm2)
• for AWG conductors / solid		2x 20 to 14
Design of the electrical connection		
• at the inputs for supply voltage		screw-type terminals
Type of connectable conductor cross section		
• at the inputs for supply voltage		
• solid		1x (0.5 ... 4 mm2), 2x (0.5 ... 2.5 mm2)
• finely stranded / with wire end processing		1x (0.5 ... 2.5 mm2), 2 (0.5 ... 1.5 mm2)
• for AWG conductors / solid		2x 20 to 14
• at the digital inputs / solid		1x (0.2 ... 2.5 mm2), 2x (0.2 ... 1.0 mm2)
Design of the electrical connection		
• at the digital inputs		screw-type terminals
Type of connectable conductor cross section		
• at the digital inputs / finely stranded / with wire end processing		1x (0.25 ... 2.5 mm2), 2x (0.25 ... 1.0 mm2)
• at the digital inputs / for AWG conductors / solid		1x 24 ... 12
Design of the electrical connection		
• at the digital outputs		screw-type terminals
Type of connectable conductor cross section / at the digital outputs		
• solid		1x (0.2 ... 2.5 mm2), 2x (0.2 ... 1.0 mm2)
• finely stranded / with wire end processing		1x (0.25 ... 2.5 mm2), 2x (0.25 ... 1.0 mm2)
• for AWG conductors / solid		1x 24 ... 12

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Dimensions and weights:		
Suitability for installation		Installation in stationary control panels in closed rooms
Mounting type / panel mounting		Yes
mounting position		vertical
Width	mm	96
Height	mm	96
Depth	mm	56
Mounting depth	mm	51
Cutout height	mm	92
Cutout width	mm	92
Material thickness		
• of the control panel	/ mm	4

Degree of protection and safety class:		
Operating resource protection class		
• when installed		II
Protection class IP		
• on the front		IP65
• rear side		IP20

Ambient conditions:		
Ambient temperature		
• during operating	°C	-10 … +55
• during storage	°C	-25 … +70
Relative humidity / at 25 °C / without condensation		
• during the operating phase	%	5 … 95
Installation altitude / at a height over sea level / maximum	m	2,000
Degree of pollution		2
Norm		
• for environmental coldness check		IEC 60068-2-1
• for environmental dry heat check		IEC 60068-2-2
• for cyclic, environmental damp heat check		IEC 60068-2-30

Certificates/approvals:		
Verification 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"
• as authorisation for USA		UL 61010-1, 2nd Ed. CAN/CSA-C22.2 NO. 61010-1-04

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• as authorisation for Canada	UL 61010-1, 2nd Ed. CAN/CSA-C22.2 NO. 61010-1-04
• authorization for Australia	Yes
• authorization for Russia	Yes

Certificates/approvals:

General Product Approval		EMC	Declaration of Conformity	other
GOST	UL	C-TICK	EG-Konf.	Confirmation

Further information:

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

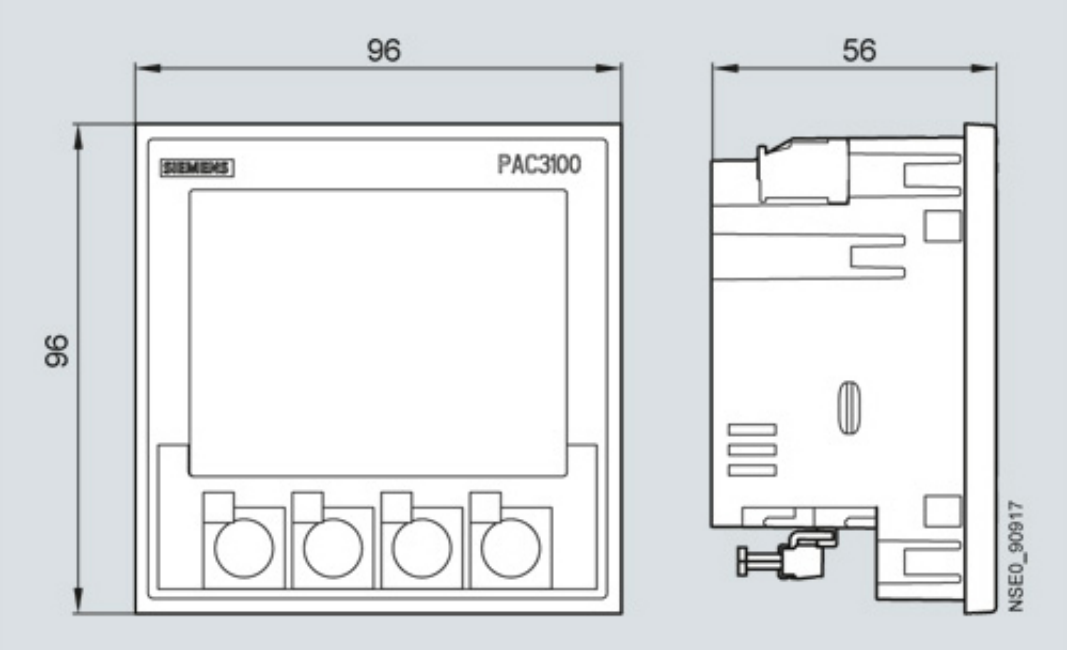
Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/7KM3133-0BA00-3AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/7KM3133-0BA00-3AA0/all

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
Datanorm GAEB81 GAEB83 RTF TXT



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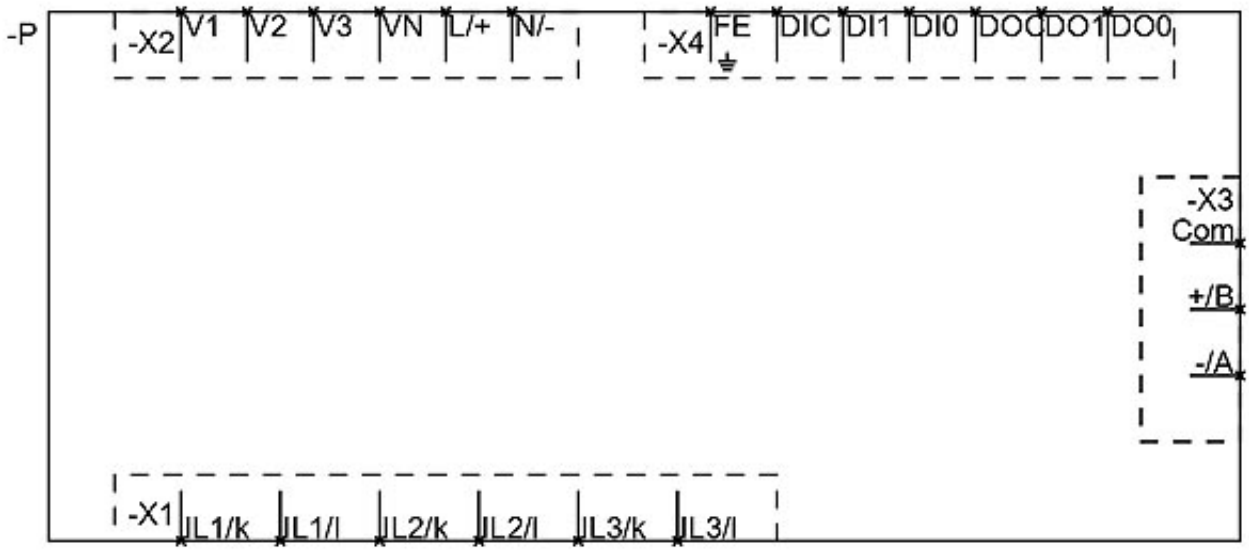

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