SIEMENS

Data sheet 6EP1331-5BA10



SITOP PSU100C/1ACDC/24VDC/1.3A

SITOP PSU100C 24 V/1.3 A stabilized power supply input: 120-230 V AC (110-300 V DC) output: 24 V DC/1.3 A *Ex approval no longer available*

nput	
type of the power supply network	1-phase AC or DC
supply voltage at AC	
minimum rated value	100 V
maximum rated value	230 V
• initial value	85 V
• full-scale value	264 V
input voltage	
• at DC	110 300 V
design of input wide range input	Yes
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
operating condition of the mains buffering	at Vin = 230 V
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at Vin = 230 V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 63 Hz
input current	
 at rated input voltage 100 V 	0.63 A
at rated input voltage 230 V	0.31 A
current limitation of inrush current at 25 °C maximum	34 A
I2t value maximum	1.2 A ² ·s
fuse protection type	internal
• in the feeder	Recommended miniature circuit breaker: from 16 A characteristic B or from 10 A characteristic C
Dutput	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
 on slow fluctuation of input voltage 	0.1 %
 on slow fluctuation of ohm loading 	0.2 %
residual ripple	
• maximum	200 mV
• typical	25 mV
voltage peak	
maximum	300 mV

• typical	20 mV
adjustable output voltage	22.2 26.4 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for output voltage OK
behavior of the output voltage when switching on	Overshoot of Vout approx. 5 %
response delay maximum	0.6 s
voltage increase time of the output voltage	
• typical	90 ms
output current	
• rated value	1.3 A
rated range	0 1.3 A; +60 +70 °C: Derating 0.8%/K; at +70 °C lout rated 1.2 A
supplied active power typical	30 W
short-term overload current	
at short-circuit during operation typical	3.1 A
product feature	
bridging of equipment	Yes; Start-up with single nominal load only
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	86 %
power loss [W]	00 /0
at rated output voltage for rated value of the output	4.5 W
current typical • during no-load operation maximum	0.75 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	3 %
setting time	
• load step 10 to 90% typical	5 ms
• load step 90 to 10% typical	5 ms
. 21	
Protection and monitoring design of the overvoltage protection	Yes, according to EN 60950-1
design of the overvoltage protection	Yes, according to EN 60950-1
design of the overvoltage protection • typical	1.4 A
design of the overvoltage protection • typical property of the output short-circuit proof	1.4 A Yes
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection	1.4 A
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit	1.4 A Yes Electronic shutdown, automatic restart
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety	1.4 A Yes Electronic shutdown, automatic restart -
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output	1.4 A Yes Electronic shutdown, automatic restart - Yes
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic resource protection class	1.4 A Yes Electronic shutdown, automatic restart - Yes
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.4 mA
design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA
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design of the overvoltage protection • typical property of the output short-circuit proof design of short-circuit protection display version for overload and short circuit Safety galvanic isolation between input and output galvanic isolation operating resource protection class leakage current • maximum • typical protection class IP Approvals certificate of suitability	1.4 A Yes Electronic shutdown, automatic restart - Yes Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 Class I 3.5 mA 0.4 mA IP20 Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2
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type of certification CB-certificate	Yes
certificate of suitability	
EAC approval	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
 American Bureau of Shipping Europe Ltd. (ABS) 	Yes
 French marine classification society (BV) 	No
• DNV GL	Yes
 Lloyds Register of Shipping (LRS) 	No
 Nippon Kaiji Kyokai (NK) 	No
EMC	
standard	
 for emitted interference 	EN 55022 Class B
 for mains harmonics limitation 	not applicable
 for interference immunity 	EN 61000-6-2
environmental conditions	
ambient temperature	
 during operation 	-20 +70 °C; with natural convection
during transport	-40 +85 °C
during storage	-40 +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
at input	L, N, PE: Removable screw terminal, each for 1 x 0.5 2.5 mm ²
at output	+: 1 screw terminal for 0.5 2.5 mm²; -: 2 screw terminals for 0.5 2.5 mm²
 for auxiliary contacts 	-
width of the enclosure	30 mm
height of the enclosure	80 mm
depth of the enclosure	100 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
net weight	0.17 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Removable spring-type terminal 6EP1971-5BA00
MTBF at 40 °C	3 838 624 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)



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