



SITOP PSU100S/1AC/24VDC/5A

SITOP PSU100S 24 V/5 A stabilized power supply input: 120/230 V AC output: 24 V DC/5 A

General information

Technical Product Detail Page

<https://i.siemens.com/1P6EP1333-2BA20>

input

type of the power supply network	1-phase AC
supply voltage at AC	Automatic range selection
supply voltage	120 V/230 V
input voltage 1 at AC	85 ... 132 V
input voltage 2 at AC	170 ... 264 V
wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
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 = 93/187 V
line frequency	50/60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	2.34 A
• at rated input voltage 230 V	1.36 A
current limitation of inrush current at 25 °C maximum	40 A
I ² t value maximum	1 A ² ·s
fuse protection type	T 3, 15 A/250 V (not accessible)
fuse protection type in the feeder	Recommended miniature circuit breaker: from 6 A characteristic C

output

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
output voltage adjustable	Yes; via potentiometer
adjustable output voltage	22.8 ... 28 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	1 %
residual ripple	
• maximum	150 mV
• typical	30 mV
voltage peak	
• maximum	240 mV
• typical	140 mV

display version for normal operation	Green LED for 24 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
behavior of the output voltage when switching on	Overshoot of $V_{out} < 3 \%$
response delay maximum	0.3 s
voltage increase time of the output voltage • typical	15 ms
output current • rated value • rated range	5 A 0 ... 6 A; 6 A up to +45°C; +60 ... +70 °C: Derating 1.6%/K
supplied active power typical	144 W
short-term overload current • on short-circuiting during the start-up typical • at short-circuit during operation typical	18 A 18 A
duration of overloading capability for excess current • on short-circuiting during the start-up • at short-circuit during operation	800 ms 800 ms
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
efficiency	
efficiency in percent	88 %
power loss [W] • at rated output voltage for rated value of the output current typical	16 W
closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
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 • load step 90 to 10% typical	1 ms 1 ms
protection and monitoring	
design of the overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 33 \text{ V}$
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
response value current limitation	6 ... 7.1 A
overcurrent overload capability • in normal operation	overload capability 150 % I_{out} rated up to 5 s/min
enduring short circuit current RMS value • typical	7.1 A
safety	
galvanic isolation between input and output	Yes
galvanic isolation	Output voltage: SELV, ES1 (IEC 62368-1), DVC As (IEC 61204-7)
operating resource protection class	Class I
leakage current • maximum • typical	3.5 mA 0.4 mA
protection class IP	IP20
EMC	
standard • for emitted interference • for mains harmonics limitation • for interference immunity	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
standards, specifications, approvals	
certificate of suitability • CE marking • UL approval • UKCA marking	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 Yes

• EAC approval • NEC Class 2	Yes No
type of certification	
• BIS • CB-certificate	Yes; R-41183539, R-41188271 Yes
MTBF at 40 °C	1 998 441 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
• IECEx • ATEX • ULhazloc approval • FM registration	No No No No
standards, specifications, approvals marine classification	
shipbuilding approval	Yes
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Lloyds Register of Shipping (LRS)	No Yes Yes No
standards, specifications, approvals Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
• total • during manufacturing • during operation • after end of life	447.1 kg 12.9 kg 433.8 kg 0.37 kg
ambient conditions	
ambient temperature	
• during operation • during transport • during storage	-25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
connection method	
type of electrical connection	screw terminal
• at input • at output • for auxiliary contacts • for signaling contact	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 2.5 mm² Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm² 2 screw terminals for 0.5 ... 2.5 mm²
mechanical data	
width × height × depth of the enclosure	50 × 125 × 120 mm
installation width × mounting height	50 mm × 225 mm
required spacing	
• top • bottom • left • right	50 mm 50 mm 0 mm 0 mm
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
• DIN-rail mounting • S7 rail mounting • wall mounting	Yes No No
housing can be lined up	Yes
net weight	0.5 kg
accessories	
electrical accessories	Buffer module
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
further information internet links	
internet link	
• to website: Industry Mall	https://mall.industry.siemens.com

- to web page: selection aid TIA Selection Tool
- to web page: power supplies
- to website: CAX-Download-Manager
- to website: Industry Online Support

<https://www.siemens.com/tstcloud>
<https://siemens.com/sitop>
<https://siemens.com/cax>
<https://support.industry.siemens.com>

additional information

other information

Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

security information

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Classifications

	Version	Classification
eClass	16	27-04-07-01
eClass	14	27-04-07-01
eClass	12	27-04-07-01
eClass	9.1	27-04-07-01
eClass	9	27-04-07-01
eClass	8	27-04-90-02
eClass	7.1	27-04-90-02
eClass	6	27-04-90-02
ETIM	10	EC002540
ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

Approvals Certificates

Environmental Product Declaration

- | | |
|--|----------|
| • global warming potential [CO2 eq] / during manufacturing | 12.9 kg |
| • global warming potential [CO2 eq] / during operation | 433.8 kg |
| • global warming potential [CO2 eq] / after end of life | 0.37 kg |
| • global warming potential [CO2 eq] / total | 447.1 kg |

Environment

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval

Maritime application

[China RoHS](#)



[Miscellaneous](#)



[BIS CRS](#)



Maritime application



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