



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 \*Ex approval no longer available\*

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 initial value	47 ... 63 Hz
line frequency full-scale value	
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 <sup>2</sup> t value maximum	1 A <sup>2</sup> ·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 initial value	22.8 V
adjustable output voltage full-scale value	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 <ul style="list-style-type: none"> <li>• typical</li> </ul>	15 ms
output current <ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>	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 <ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> <li>• at short-circuit during operation typical</li> </ul>	18 A 18 A
duration of overloading capability for excess current <ul style="list-style-type: none"> <li>• on short-circuiting during the start-up</li> <li>• at short-circuit during operation</li> </ul>	800 ms 800 ms
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
efficiency in percent	88 %
power loss [W] <ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	16 W
<b>closed-loop control</b>	
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 <ul style="list-style-type: none"> <li>• load step 10 to 90% typical</li> <li>• load step 90 to 10% typical</li> </ul>	1 ms 1 ms
<b>protection and monitoring</b>	
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 <ul style="list-style-type: none"> <li>• response value current limitation</li> </ul>	Constant current characteristic 6 ... 7.1 A
overcurrent overload capability <ul style="list-style-type: none"> <li>• in normal operation</li> </ul>	overload capability 150 % $I_{out}$ rated up to 5 s/min
enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	7.1 A
<b>safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.4 mA
protection class IP	IP20
standard <ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
<b>standards, specifications, approvals</b>	
certificate of suitability <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• EAC approval</li> <li>• NEC Class 2</li> </ul>	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes No
type of certification	

<ul style="list-style-type: none"> <li>• BIS</li> </ul>	Yes; R-41188271
<ul style="list-style-type: none"> <li>• CB-certificate</li> </ul>	Yes
MTBF at 40 °C	1 998 441 h
<b>standards, specifications, approvals hazardous environments</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX</li> </ul>	No
<ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>	No
<ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• FM registration</li> </ul>	No
<b>standards, specifications, approvals marine classification</b>	
shipbuilding approval	Yes
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<b>standards, specifications, approvals Environmental Product Declaration</b>	
Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
<ul style="list-style-type: none"> <li>• total</li> </ul>	513.7 kg
<ul style="list-style-type: none"> <li>• during manufacturing</li> </ul>	12.9 kg
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	500.4 kg
<ul style="list-style-type: none"> <li>• after end of life</li> </ul>	0.35 kg
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-25 ... +70 °C; with natural convection
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
<b>connection method</b>	
type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> <li>• at input</li> </ul>	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
<ul style="list-style-type: none"> <li>• at output</li> </ul>	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• for signaling contact</li> </ul>	2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>
<b>mechanical data</b>	
width × height × depth of the enclosure	50 × 125 × 120 mm
installation width × mounting height	50 × 225 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>• left</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• right</li> </ul>	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
<ul style="list-style-type: none"> <li>• standard rail mounting</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• S7 rail mounting</li> </ul>	No
<ul style="list-style-type: none"> <li>• wall mounting</li> </ul>	No
housing can be lined up	Yes
net weight	0.5 kg
<b>accessories</b>	
electrical accessories	Buffer module
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
<b>further information internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>	<a href="https://siemens.com/tst">https://siemens.com/tst</a>
<ul style="list-style-type: none"> <li>• to website: Industrial communication</li> </ul>	<a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>
<ul style="list-style-type: none"> <li>• to website: CAX-Download-Manager</li> </ul>	<a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>
<b>additional information</b>	
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	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	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

Approvals Certificates

General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval

For use in hazardous locations

Marine / Shipping

[Miscellaneous](#)



[CCC-Ex](#)



Marine / Shipping

Environment



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