



SITOP PSU100L/1AC/24VDC/2.5A

SITOP PSU100L 24 V/2.5 A Stabilized power supply input: 120/230 V AC, output: DC 24 V/2,5 A

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	Set by means of selector switch on the device
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	93 ... 132 V
• 2 at AC	187 ... 264 V
design of input wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
operating condition of the mains buffering	at Vin = 93/187 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 = 93/187 V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	1.1 A
• at rated input voltage 230 V	0.65 A
current limitation of inrush current at 25 °C maximum	27 A
duration of inrush current limiting at 25 °C	
• typical	3 ms
I2t value maximum	0.3 A²·s
fuse protection type	T 2 A/250 V (not accessible)
• in the feeder	Recommended miniature circuit breaker: from 3 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
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	0.5 %
residual ripple	
• maximum	150 mV
• typical	10 mV
voltage peak	

<ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	240 mV
adjustable output voltage	50 mV
product function output voltage adjustable	22.8 ... 26.4 V
type of output voltage setting	Yes
display version for normal operation	via potentiometer
behavior of the output voltage when switching on	Green LED for 24 V OK
response delay maximum	Overshoot of Vout approx. 4 %
voltage increase time of the output voltage	1.5 s
<ul style="list-style-type: none"> <li>• typical</li> </ul>	150 ms
output current	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>	2.5 A
supplied active power typical	0 ... 2.5 A; +45 ... +60 °C: Derating 2%/K
product feature	60 W
<ul style="list-style-type: none"> <li>• bridging of equipment</li> </ul>	Yes
number of parallel-switched equipment resources for increasing the power	2
<b>Efficiency</b>	
efficiency in percent	85 %
power loss [W]	
<ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	9 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	2 %
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>	0.5 ms
	0.7 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection	< 33 V
response value current limitation typical	2.6 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	4 A
display version for overload and short circuit	-
<b>Safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout 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
<b>Approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• cCSAus, Class 1, Division 2</li> <li>• ATEX</li> </ul>	Yes
	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
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	No
	No
certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> <li>• NEC Class 2</li> <li>• ULhazloc approval</li> <li>• FM registration</li> </ul>	No
	No
	No
	No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	Yes
certificate of suitability shipbuilding approval	No

shipbuilding approval	-
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (BV)	No
• DNV GL	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
<b>EMC</b>	
standard	
• for emitted interference	EN 55022 Class A
• for mains harmonics limitation	not applicable
• for interference immunity	EN 61000-6-2
<b>environmental conditions</b>	
ambient temperature	
• during operation	0 ... 60 °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
<b>Mechanics</b>	
type of electrical connection	screw-type terminals
• at input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
• at output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
• for auxiliary contacts	-
width of the enclosure	32.5 mm
height of the enclosure	125 mm
depth of the enclosure	120 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
net weight	0.3 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	3 153 082 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

