



SITOP PSU100L/1AC/24VDC/20A

SITOP PSU100L 24 V/20 A Stabilized power supply input: 100-240 V AC  
output: 24 V DC/20 A

Input	
Input	1-phase AC or DC
Rated voltage value $V_{in}$ rated supply voltage	100 ... 240 V
<ul style="list-style-type: none"> <li>at DC</li> </ul>	100 ... 240 V
input voltage	
<ul style="list-style-type: none"> <li>1 at AC</li> </ul>	85 ... 264 V
<ul style="list-style-type: none"> <li>at DC</li> </ul>	88 ... 370 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 93/187$ V
Mains buffering at $I_{out}$ rated, min.	20 ms; at $V_{in} = 93/187$ V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> <li>at rated input voltage 120 V</li> </ul>	5.55 A
<ul style="list-style-type: none"> <li>at rated input voltage 230 V</li> </ul>	2.35 A
Switch-on current limiting (+25 °C), max.	45 A
duration of inrush current limiting at 25 °C	
<ul style="list-style-type: none"> <li>typical</li> </ul>	15 ms
$I^2t$ , max.	3.3 A <sup>2</sup> ·s
Built-in incoming fuse	T 10 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C
Output	
Output	Controlled, isolated DC voltage
Rated voltage $V_{out}$ DC	24 V
<ul style="list-style-type: none"> <li>output voltage at output 1 at DC rated value</li> </ul>	24 V
Total tolerance, static $\pm$	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	1 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	100 mV
Adjustment range	22.8 ... 26.4 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
On/off behavior	No overshoot of $V_{out}$ (soft start)

Startup delay, max.	1.5 s
Voltage rise, typ.	20 ms
Rated current value I <sub>out</sub> rated	20 A
Current range	0 ... 20 A
• Note	+45 ... +70 °C: Derating 2.5%/K
supplied active power typical	480 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2
<b>Efficiency</b>	
Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	92 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	45 W
<b>Closed-loop control</b>	
Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.	0.5 %
Dynamic load smoothing (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> ± typ.	3 %
Load step setting time 10 to 90%, typ.	0.7 ms
Load step setting time 90 to 10%, typ.	6 ms
<b>Protection and monitoring</b>	
Output overvoltage protection	< 33 V
Current limitation, typ.	24 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• typical	24 A
Overload/short-circuit indicator	-
<b>Safety</b>	
Primary/secondary isolation	Yes
galvanic isolation	Safety extra-low output voltage U <sub>out</sub> acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	0.8 mA
Degree of protection (EN 60529)	IP20
<b>Approvals</b>	
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
certificate of suitability NEC Class 2	No
CB approval	Yes
certificate of suitability EAC approval	Yes
Marine approval	-
<b>EMC</b>	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
<b>environmental conditions</b>	
ambient temperature	
• during operation	-25 ... +70 °C
— Note	with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 ... 95% no condensation
<b>Mechanics</b>	
Connection technology	screw-type terminals
Connections	
• Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
• Auxiliary	-
width of the enclosure	110 mm

height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	1.8 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

