



SITOP PSU100L 24 V/5 A STABILIZED POWER SUPPLY INPUT:  
120/230 V AC OUTPUT: 24 V/5 A DC

### Technical specifications

Product	SITOP PSU100L
Power supply, type	24 V/5 A

### Input

Input	1-phase AC
Supply voltage 1 with AC Rated value	120 V
Supply voltage 2 with AC Rated value	230 V
• Note	Set by means of selector switch on the device
Input voltage 1 with AC	93 ... 132 V
Input voltage 2 with AC	187 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering at I <sub>out</sub> rated, min.	20 ms; at $V_{in} = 93/187$ V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	2.1 A
Input current at rated input voltage 230 V Rated value	1.15 A
Switch-on current limiting (+25 °C), max.	32 A
Duration of inrush current limiting at 25 °C typical	3 ms
I <sup>2</sup> t, max.	0.8 A <sup>2</sup> ·s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 6 A characteristic C

### Output

Output	Controlled, isolated DC voltage
Rated voltage $V_{out}$ DC	24 V
Total tolerance, static $\pm$	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.5 %
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)	150 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	Overshoot of $V_{out}$ approx. 4 %
Startup delay, max.	1.5 s
Voltage rise, typ.	130 ms
Rated current value $I_{out}$ rated	5 A
Current range	0 ... 5 A
• Note	+45 ... +60 °C: Derating 2%/K
Active power supplied typical	120 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

### Efficiency

Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	86 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	17 W

### Closed-loop control

Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.	0.3 %
Dynamic load smoothing ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ typ.	2 %
Load step setting time 10 to 90%, typ.	0.4 ms
Load step setting time 90 to 10%, typ.	0.4 ms

### Protection and monitoring

Output overvoltage protection	< 33 V
Current limitation, typ.	5.25 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value typical	8 A
Overload/short-circuit indicator	-

### Safety

Primary/secondary isolation	Yes
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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
Leakage current typical	0.4 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	-
Degree of protection (EN 60529)	IP20

### EMC

Emitted interference	EN 55022 Class A
Supply harmonics limitation	-
Noise immunity	EN 61000-6-2

### Operating data

Ambient temperature during operation	0 ... 60 °C
<ul style="list-style-type: none"> <li>Note</li> </ul>	with natural convection
Ambient temperature during transport	-40 ... +85 °C
Ambient temperature during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation

### Mechanics

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
Connections Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
Connections Auxiliary	-
Width of the enclosure	50 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.5 kg
Product property of the enclosure housing for side-by-side mounting	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)