

SITOP PSU100L/1AC/24VDC/10A  
 SITOP PSU100L 24 V/10 A Stabilized power supply input: 120/230 V  
 AC, output: DC 24 V/10 A



Input	
Input	1-phase AC
• Note	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
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in \text{ rated}}$ , 1.3 ms
Mains buffering	at $V_{in} = 93/187 \text{ V}$
Mains buffering at lout rated, min.	20 ms; at $V_{in} = 93/187 \text{ V}$
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
input current	
• at rated input voltage 120 V	4.1 A
• at rated input voltage 230 V	2 A

Switch-on current limiting (+25 °C), max.	65 A
duration of inrush current limiting at 25 °C	
• typical	3 ms
I <sup>2</sup> t, max.	3.3 A <sup>2</sup> ·s
Built-in incoming fuse	T 6.3 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 <sub>out</sub> DC	24 V
Total tolerance, static ±	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 <sub>out</sub> approx. 4 %
Startup delay, max.	1.5 s
Voltage rise, typ.	170 ms
Rated current value I <sub>out</sub> rated	10 A
Current range	0 ... 10 A
• Note	+45 ... +60 °C: Derating 2%/K
supplied active power typical	240 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

## Efficiency

Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	89 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	34 W

## Closed-loop control

Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.	0.3 %
Dynamic load smoothing (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> ± typ.	2 %
Load step setting time 10 to 90%, typ.	0.5 ms
Load step setting time 90 to 10%, typ.	0.7 ms

## Protection and monitoring

Output overvoltage protection	< 33 V
Current limitation, typ.	16 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• typical	12.6 A
Overload/short-circuit indicator	-

### Safety

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

### Approvals

CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	-

### EMC

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

### environmental conditions

ambient temperature	
• during operation	0 ... 60 °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

### 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
• Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>

• Auxiliary	-
width of the enclosure	70 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
Weight, approx.	0.75 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	2 333 396 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)