

SITOP PSU100D/1AC/24VDC/3.1A
 PSU100D 24 V /3.1 A Stabilized power supply input: 100-240 V AC
 output: 24 V DC/3.1 A



Input	
Input	1-phase AC
Rated voltage value V_{in} rated	100 ... 240 V
Voltage range AC	85 ... 264 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 115/230$ V
Mains buffering at I_{out} rated, min.	15 ms; at $V_{in} = 115/230$ 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 100 V	1.5 A
• at rated input voltage 240 V	1 A
Switch-on current limiting (+25 °C), max.	60 A
I^2t , max.	1.2 A ² ·s
Built-in incoming fuse	internal
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C or from 16 A characteristic B

Output

Output	Controlled, isolated DC voltage
Rated voltage V_{out} DC	24 V
Total tolerance, static \pm	2 %
Static mains compensation, approx.	0.5 %
Static load balancing, approx.	1 %
Residual ripple peak-peak, max.	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	100 mV
Adjustment range	22 ... 28 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} < 2 %
Startup delay, max.	2.5 s
voltage increase time of the output voltage maximum	30 ms
Rated current value I_{out} rated	3.1 A
Current range	0 ... 3.1 A
• Note	+50 ... +70 °C: Derating 2.5%/K
supplied active power typical	75 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.	12 W

Closed-loop control

Dynamic mains compensation (V_{in} rated ± 15 %), max.	0.5 %
Dynamic load smoothing (I_{out} : 50/100/50 %), U_{out} \pm typ.	5 %

Protection and monitoring

Output overvoltage protection	< 35 V
Current limitation, typ.	3.7 A
property of the output short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
• typical	6 A
Overload/short-circuit indicator	-

Safety

Primary/secondary isolation	Yes
galvanic isolation	Safety extra low output voltage V_{out} according to EN 60950-1
Protection class	Class I
leakage current	

<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	1 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; cURus (UL 60950-1, CSA C22.2 No. 60950-1), File E151273
Explosion protection certificate of suitability NEC Class 2	-
FM approval	No
CB approval	-
Marine approval	Yes
	-

EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

environmental conditions

ambient temperature	
<ul style="list-style-type: none"> • during operation 	-10 ... +70 °C
— Note	with natural convection
<ul style="list-style-type: none"> • during transport 	-40 ... +85 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +85 °C

Mechanics

Connection technology	screw-type terminals
Connections	
<ul style="list-style-type: none"> • Supply input 	L, N, PE: 1 screw terminal each for 0.3 ... 1.3 mm ² single-core/finely stranded
<ul style="list-style-type: none"> • Output 	+, -: 1 screw terminal each for 0.3 ... 1.3 mm ²
<ul style="list-style-type: none"> • Auxiliary 	-
width of the enclosure	97 mm
height of the enclosure	128 mm
depth of the enclosure	38 mm
required spacing	
<ul style="list-style-type: none"> • top 	20 mm
<ul style="list-style-type: none"> • bottom 	0 mm
<ul style="list-style-type: none"> • left 	20 mm
<ul style="list-style-type: none"> • right 	20 mm
Weight, approx.	0.37 kg
Installation	Wall mounting
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

