

SITOP PSU100E/1AC/48VDC/5A
 SITOP PSU100E 48 V/5 A Stabilized power supply Input: 120 / 230
 V AC Output: 48 V DC/5 A



Input	
Input	1-phase AC
supply voltage	
• 1 at AC rated value	100 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	170 ... 264 V
Wide-range input	No
Mains buffering	at $V_{in} = 120/230\text{ V}$
Mains buffering at I _{out} rated, min.	30 ms; at $V_{in} = 120/230\text{ V}$
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	4.4 A
• at rated input voltage 230 V	2 A
Switch-on current limiting (+25 °C), max.	58 A
I ² t, max.	1.5 A ² ·s

Built-in incoming fuse	T 6.3 A (not accessible), soldered
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	48 V
Total tolerance, static \pm	3 %
Static mains compensation, approx.	0.2 %
Static load balancing, approx.	0.5 %
Residual ripple peak-peak, max.	50 mV
Residual ripple peak-peak, typ.	30 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	150 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	100 mV
Adjustment range	48 ... 54 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 240 W
Status display	Green LED for 48 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK
On/off behavior	Overshoot of V_{out} approx. 2 %
Startup delay, max.	1.5 s
Voltage rise, typ.	15 ms
voltage increase time of the output voltage maximum	500 ms
Rated current value I_{out} rated	5 A
Current range	0 ... 5 A
• Note	+60 ... +70 °C: Derating 5%/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_{out} rated, I_{out} rated, approx.	92 %
Power loss at V_{out} rated, I_{out} rated, approx.	12 W

Closed-loop control

Dynamic mains compensation (V_{in} rated ± 15 %), max.	0.3 %
Dynamic load smoothing (I_{out} : 10/90/10 %), $U_{out} \pm$ typ.	1 %
Load step setting time 10 to 90%, typ.	0.5 ms
Load step setting time 90 to 10%, typ.	0.5 ms
setting time maximum	1 ms

Protection and monitoring

Output overvoltage protection	< 60 V
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Current limitation, typ.	5.3 A
property of the output short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
• typical	8.7 A

Safety

Primary/secondary isolation	Yes
galvanic isolation	Safety extra-low output voltage U _{out} acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current	
• maximum	3.5 mA
• 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
Explosion protection	-
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	No
Marine approval	-

EMC

Emitted interference	EN 61000-6-4
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

environmental conditions

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

Mechanics

Connection technology	screw-type terminals
Connections	
• Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.5 ... 2.5 mm ²
width of the enclosure	42 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.	0.5 kg
product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	1 050 000 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)