



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	
type of the power supply network	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
design of input wide range input	No
operating condition of the mains buffering	at $V_{in} = 120/230\text{ V}$
buffering time for rated value of the output current in the event of power failure minimum	30 ms
operating condition of the mains buffering	at $V_{in} = 120/230\text{ V}$
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	4.4 A
• at rated input voltage 230 V	2 A
current limitation of inrush current at 25 °C maximum	58 A
I <sup>2</sup> t value maximum	1.5 A <sup>2</sup> ·s
fuse protection type	T 6.3 A (not accessible), soldered
• in the feeder	Recommended miniature circuit breaker: from 10 A characteristic C
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	48 V
output voltage	
• at output 1 at DC rated value	48 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.2 %
• on slow fluctuation of ohm loading	0.5 %
residual ripple	
• maximum	50 mV
• typical	30 mV
voltage peak	
• maximum	150 mV
• typical	100 mV
adjustable output voltage	48 ... 54 V

product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 240 W
display version for normal operation	Green LED for 48 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK
behavior of the output voltage when switching on	Overshoot of Vout approx. 2 %
response delay maximum	1.5 s
voltage increase time of the output voltage	
• typical	15 ms
• maximum	500 ms
output current	
• rated value	5 A
• rated range	0 ... 5 A; +60 ... +70 °C: Derating 5%/K
supplied active power typical	240 W
product feature	
• bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
<b>Efficiency</b>	
efficiency in percent	92 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	12 W
<b>Closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	1 %
setting time	
• load step 10 to 90% typical	0.5 ms
• load step 90 to 10% typical	0.5 ms
• maximum	1 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection	< 60 V
response value current limitation typical	5.3 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
• typical	8.7 A
<b>Safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
protection class IP	IP20
<b>Approvals</b>	
certificate of suitability	
• CE marking	Yes
• UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• CSA approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
• cCSAus, Class 1, Division 2	No
• ATEX	No
certificate of suitability	
• IECEX	No
• NEC Class 2	No
• ULhazloc approval	No
• FM registration	No
type of certification CB-certificate	No
certificate of suitability	

• EAC approval	Yes
certificate of suitability shipbuilding approval	No
shipbuilding approval	-
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (BV)	No
• DNV GL	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
<b>EMC</b>	
standard	
• for emitted interference	EN 61000-6-4
• for mains harmonics limitation	EN 61000-3-2
• for interference immunity	EN 61000-6-2
<b>environmental conditions</b>	
ambient temperature	
• during operation	-25 ... +70 °C; with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
<b>Mechanics</b>	
type of electrical connection	screw-type terminals
• at input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
• at output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
• for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup>
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
net weight	0.5 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	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)

