



SITOP PSU100S/1AC/24VDC/10A

SITOP PSU100S 24 V/10 A Stabilized power supply input: 120/230 V AC, output: DC 24 V/10 A *Ex approval no longer available*

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	Automatic range selection
supply voltage	
• 1 at AC rated value	120 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
overvoltage overload capability	$2.3 \times V_{in}$ rated, 1.3 ms
operating condition of the mains buffering	at $V_{in} = 93/187$ V
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at $V_{in} = 93/187$ 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	4.49 A
• at rated input voltage 230 V	1.91 A
current limitation of inrush current at 25 °C maximum	60 A
I ² t value maximum	5.6 A ² ·s
fuse protection type	T 6.3 A/250 V (not accessible)
• 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	24 V
output voltage	
• at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.1 %
• on slow fluctuation of ohm loading	1 %
residual ripple	
• maximum	150 mV
• typical	20 mV
voltage peak	

<ul style="list-style-type: none"> • maximum 	240 mV
<ul style="list-style-type: none"> • typical 	160 mV
adjustable output voltage	22.8 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for 24 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
behavior of the output voltage when switching on	Overshoot of Vout < 3 %
response delay maximum	0.3 s
voltage increase time of the output voltage	
<ul style="list-style-type: none"> • typical 	20 ms
output current	
<ul style="list-style-type: none"> • rated value 	10 A
<ul style="list-style-type: none"> • rated range 	0 ... 12 A; 12 A up to +45°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	288 W
short-term overload current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up typical 	32 A
<ul style="list-style-type: none"> • at short-circuit during operation typical 	32 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up 	1 000 ms
<ul style="list-style-type: none"> • at short-circuit during operation 	1 000 ms
product feature	
<ul style="list-style-type: none"> • bridging of equipment 	Yes
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	90 %
power loss [W]	
<ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical 	25 W
Closed-loop control	
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	3 %
setting time	
<ul style="list-style-type: none"> • load step 10 to 90% typical 	1 ms
<ul style="list-style-type: none"> • load step 90 to 10% typical 	1 ms
Protection and monitoring	
design of the overvoltage protection	protection against overvoltage in case of internal fault Vout < 33 V
response value current limitation	12 ... 14.6 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
<ul style="list-style-type: none"> • typical 	14.6 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
display version for overload and short circuit	-
Safety	
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	
<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	0.8 mA
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • UL approval 	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> • CSA approval 	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259.

<ul style="list-style-type: none"> • cCSAus, Class 1, Division 2 • ATEX 	cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) No No
certificate of suitability <ul style="list-style-type: none"> • IECEx • NEC Class 2 • ULhazloc approval • FM registration 	No No No No
type of certification CB-certificate	Yes
certificate of suitability <ul style="list-style-type: none"> • EAC approval 	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	BV, DNV GL
Marine classification association <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • DNV GL • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) 	No Yes Yes No No
EMC	
standard <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity 	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
environmental conditions	
ambient temperature <ul style="list-style-type: none"> • during operation • during transport • during storage 	-25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
Mechanics	
type of electrical connection <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts • for signaling contact 	screw-type terminals L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 2.5 mm² Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm² 2 screw terminals for 0.5 ... 2.5 mm²
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	120 mm
required spacing <ul style="list-style-type: none"> • top • bottom • left • right 	50 mm 50 mm 0 mm 0 mm
net weight	0.8 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Buffer module
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	1 614 510 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

