



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	
Input	1-phase AC
• Note	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
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 93/187$ V
Mains buffering at I_{out} rated, min.	20 ms; at $V_{in} = 93/187$ 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	4.49 A
• at rated input voltage 230 V	1.91 A
Switch-on current limiting (+25 °C), max.	60 A
I^2t , max.	5.6 A ² ·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_{out} DC	24 V
• output voltage at output 1 at DC rated value	24 V
Total tolerance, static \pm	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	1 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	20 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	160 mV
Adjustment range	22.8 ... 28 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"

On/off behavior	Overshoot of Vout < 3 %
Startup delay, max.	0.3 s
Voltage rise, typ.	20 ms
Rated current value Iout rated	10 A
Current range	0 ... 12 A
• Note	12 A up to +45°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	288 W
short-term overload current	
• on short-circuiting during the start-up typical	32 A
• at short-circuit during operation typical	32 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	1 000 ms
• at short-circuit during operation	1 000 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2
Efficiency	
Efficiency at Vout rated, Iout rated, approx.	90 %
Power loss at Vout rated, Iout rated, approx.	25 W
Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	0.3 %
Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ.	3 %
Load step setting time 10 to 90%, typ.	1 ms
Load step setting time 90 to 10%, typ.	1 ms
Protection and monitoring	
Output overvoltage protection	protection against overvoltage in case of internal fault Vout < 33 V
Current limitation	12 ... 14.6 A
property of the output short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
• typical	14.6 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes
galvanic isolation	Safety extra-low output voltage Uout 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, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
certificate of suitability NEC Class 2	No
CB approval	Yes
certificate of suitability EAC approval	Yes
Marine approval	BV, DNV GL
EMC	
Emitted interference	EN 55022 Class B
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	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm ²
• signaling contact	2 screw terminals for 0.5 ... 2.5 mm ²
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.	0.8 kg
product feature of the enclosure housing can be lined up	Yes
Installation	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)

