



SITOP PSU100S 24 V/2.5 A
 SITOP PSU100S 24 V/2.5 A STABILIZED POWER SUPPLY INPUT:
 120/230 V AC OUTPUT: 24 V/2.5 A DC

Input	
Input	1-phase AC
Supply voltage	
• 1 with AC Rated value	120 V
• 2 with AC Rated value	230 V
• Note	Automatic range selection
Input voltage	
• 1 with AC	85 ... 132 V
• 2 with AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering at I_{out} rated, min.	20 ms; at $V_{in} = 93/187$ V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current	
• at rated input voltage 120 V	1.25 A
• at rated input voltage 230 V	0.74 A
Switch-on current limiting (+25 °C), max.	33 A
I^2t , max.	0.4 A ² ·s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 3 A characteristic C
Output	
Output	Controlled, isolated DC voltage
Rated voltage V_{out} DC	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.	30 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	70 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 $V_{out} < 3 \%$
Startup delay, max.	0.3 s
Voltage rise, typ.	15 ms
Rated current value $I_{out\ rated}$	2.5 A
Current range	0 ... 3 A
• Note	3 A up to +45°C; +60 ... +70 °C: Derating 3%/K
Active power supplied typical	60 W
Short-term overload current	
• on short-circuiting during the start-up typical	9 A
• at short-circuit during operation typical	9 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	100 ms
• at short-circuit during operation	800 ms
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.	85 %
Power loss at $V_{out\ rated}$, $I_{out\ rated}$, approx.	10 W

Closed-loop control	
Dynamic mains compensation ($V_{in\ rated} \pm 15 \%$), max.	0.3 %
Dynamic load smoothing ($I_{out}: 10/90/10 \%$), $U_{out} \pm$ typ.	5 %
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 $V_{out} < 33\text{ V}$
Current limitation	3 ... 3.4 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic

Enduring short circuit current RMS value	
<ul style="list-style-type: none"> • typical 	3.4 A
Overcurrent overload capability in normal operation	overload capability 150 % I _{out} rated up to 5 s/min
Overload/short-circuit indicator	-

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	
<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	0.4 mA
CE mark	Yes
UL/CSA approval	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, UL 1604)
Explosion protection	ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213-M1987, ANSI/ISA-12.12.01-2007) Class I, Div. 2, Group ABCD, T4
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	GL, BV
Degree of protection (EN 60529)	IP20

EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	not applicable
Noise immunity	EN 61000-6-2

Operating data

Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +70 °C
<ul style="list-style-type: none"> — 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
Humidity class according to EN 60721	Climate class 3K3, no condensation

Mechanics

Connection technology	screw-type terminals
Connections	
<ul style="list-style-type: none"> • Supply input 	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
<ul style="list-style-type: none"> • 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
Width of the enclosure	32.5 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.32 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)