



SITOP PSU100S 24 V/10 A
 SITOP PSU100S 24 V/10 A STABILIZED POWER SUPPLY INPUT:
 120/230 V AC OUTPUT: 24 V/10 A DC

Input	
Input	1-phase AC
Supply voltage	
<ul style="list-style-type: none"> • 1 with AC Rated value • 2 with AC Rated value • Note 	120 V 230 V Automatic range selection
Input voltage	
<ul style="list-style-type: none"> • 1 with AC • 2 with AC 	85 ... 132 V 170 ... 264 V
Wide-range input	No
Oversvoltage resistance	$2.3 \times V_{in \text{ rated}}$, 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	
<ul style="list-style-type: none"> • at rated input voltage 120 V • at rated input voltage 230 V 	4.49 A 1.91 A
Switch-on current limiting (+25 °C), max.	60 A
I ² t, 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

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 $V_{out} < 3 \%$
Startup delay, max.	0.3 s
Voltage rise, typ.	20 ms
Rated current value I_{out} rated	10 A
Current range	0 ... 12 A
• Note	12 A up to +45°C; +60 ... +70 °C: Derating 3%/K
Active power supplied 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 V_{out} rated, I_{out} rated, approx.	90 %
Power loss at V_{out} rated, I_{out} rated, approx.	25 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.	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 $V_{out} < 33 \text{ V}$
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 % 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	
• maximum	3.5 mA
• typical	0.8 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	EN 61000-3-2
Noise immunity	EN 61000-6-2

Operating data

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, 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

<ul style="list-style-type: none"> • Output • Auxiliary 	<p>+, -: 2 screw terminals each for 0.5 ... 2.5 mm²</p> <p>Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm²</p>
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.8 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)