



SITOP PSU100S 24 V/5 A STABILIZED POWER SUPPLY  
INPUT: 120/230 V AC OUTPUT: 24 V/5 A DC

## Technical specifications

Product	SITOP PSU100S
Power supply, type	24 V/5 A
<b>Input</b>	
Input	1-phase AC
Supply voltage / 1 / at AC / nominal value	120 V
Supply voltage / 2 / at AC / nominal value	230 V
Voltage range	
• Note	Automatic range selection
Input voltage / 1 / at AC	85 ... 132 V
Input voltage / 2 / at AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at lout rated, min.	20 ms
Mains buffering	at Vin = 93/187 V
Rated line frequency	50 / 60 Hz
Rated line range	47 ... 63 Hz
Input current / at nominal level of the input voltage 120 V	2.34 A
Input current / at nominal level of the input voltage 230 V	1.36 A
Switch-on current limiting (+25 °C), max.	40 A
I <sup>2</sup> t, max.	1 A <sup>2</sup> ·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 6 A characteristic C
<b>Output</b>	
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)	140 mV
Adjustment range	22.8 ... 28 V
Product feature / 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	5 A
Current range	0 ... 6 A
• Note	6 A up to +45°C; +60 ... +70 °C: Derating 1.6%/K
delivered active power / typ.	144 W
short-term overload current / at short-circuit during run-up / typical	18 A
Duration of overloading ability for excess current / on short-circuiting during the start-up	800 ms
short-term overload current / at short-circuit during operation / typical	18 A
Duration of overloading ability for excess current / on short-circuiting during the operational phase	800 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2
<b>Efficiency</b>	
Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	88 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	16 W
<b>Closed-loop control</b>	
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

<b>Protection and monitoring</b>	
Output overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 33 \text{ V}$
Current limitation	6 ... 7.1 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current / Effective level / typical	7.1 A
• Note	overload capability 150 % $I_{out}$ rated up to 5 s/min
Overload/short-circuit indicator	-
<b>Safety</b>	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178
Protection class	Class I
stray current / maximum	3.5 mA
stray current / 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
FM approval	-
CB approval	Yes
Marine approval	GL, BV
Degree of protection (EN 60529)	IP20
<b>EMC</b>	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2
<b>Operating data</b>	
Ambient temperature / in operation	-10 ... +70 °C
• Note	with natural convection
Ambient temperature / on transport	-40 ... +85 °C
Ambient temperature / in storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation
<b>Mechanics</b>	
Connection technology	screw-type terminals
Connections / Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded
Connections / Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>
Connections / Auxiliary	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>

Width / of the housing	50 mm
Height / of the housing	125 mm
Depth / of the housing	120 mm
Installation width	50 mm
Mounting height	225 mm
Weight, approx.	0.5 kg
Product feature / of the housing / housing for side-by-side mounting	Yes
Mounting type / wall mounting	No
Type of mounting / standard rail mounting	Yes
Mounting type / S7-300 rail mounting	No
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)

**letzte Änderung:**

Mar 17, 2014