

SITOP PSU100P/1AC/24VDC/5A/IP67
 SITOP PSU100P IP67 Stabilized power supply input: 120/230 V AC,
 output: 24 V DC/5 A



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	Implemented internally with varistor
Mains buffering	at $V_{in} = 120/230\text{ V}$
Mains buffering at lout rated, min.	40 ms; at $V_{in} = 120/230\text{ V}$
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	2.25 A
• at rated input voltage 230 V	1.24 A

Switch-on current limiting (+25 °C), max.	15 A
I ² t, max.	0.6 A ² ·s
Built-in incoming fuse	T 3.15 A
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 6 A characteristic C/B

Output

Output	Controlled, isolated DC voltage
Rated voltage V _{out} DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.2 %
Residual ripple peak-peak, max.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	100 mV
Product function output voltage adjustable	No
Status display	Green LED: 24 V OK; red LED flashing: "overload/short-circuit"
Signaling	Relay contact (NO contact, rating 30 V AC/ 0.5 A; 30 V DC/1 A) for 24 V OK
On/off behavior	Overshoot of V _{out} < 3 %
Startup delay, max.	1.5 s
Voltage rise, typ.	22 ms
Voltage increase time of the output voltage maximum	100 ms
Rated current value I _{out} rated	5 A
Current range	0 ... 5 A
Supplied active power typical	133 W
Short-term overload current	
• on short-circuiting during the start-up typical	20 A
• at short-circuit during operation typical	20 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	50 ms
• at short-circuit during operation	50 ms
Parallel switching for enhanced performance	Yes; Symmetric wiring required
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.	12.9 W

Closed-loop control

Dynamic mains compensation (V _{in} rated ±15 %), max.	0.2 %
Dynamic load smoothing (I _{out} : 50/100/50 %), U _{out} ± typ.	1 %
Setting time maximum	2 ms

Protection and monitoring	
Output overvoltage protection	< 29 V
Current limitation, typ.	5.5 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current RMS value	
• maximum	6 A
• typical	5 A
Overload/short-circuit indicator	Red LED flashing for "overload/short-circuit"

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	1 mA
Degree of protection (EN 60529)	IP67, enclosure type 5 indoor

Approvals	
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1)
Explosion protection	-
FM approval	-
CB approval	No
Marine approval	-

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 ... +60 °C
— Note	with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
Humidity class according to EN 60721	3K6 without direct sunlight

Mechanics	
Connection technology	screw-type terminals
Connections	
• Supply input	L1, N, PE: Plug connector 7/8" (counterpart see "Operating Instructions (compact)")

<ul style="list-style-type: none"> • Output 	+ , - : Plug connector 7/8" (counterpart see "Operating Instructions (compact)")
<ul style="list-style-type: none"> • Auxiliary 	Alarm signals: M12 plug-in connector 4-pin
Product function	
<ul style="list-style-type: none"> • removable terminal at input 	Yes
<ul style="list-style-type: none"> • removable terminal at output 	Yes
Width of the enclosure	120 mm
Height of the enclosure	181 mm
Depth of the enclosure	60.5 mm
Required spacing	
<ul style="list-style-type: none"> • top 	50 mm
<ul style="list-style-type: none"> • bottom 	0 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm
Weight, approx.	1.1 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Wall mounting
MTBF at 40 °C	1 500 000 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)