

SITOP PSU100C 24 V/2.5 A  
 SITOP PSU100C 24 V/2.5 A Stabilized power supply input: 120-230 V AC (DC 110-300 V) output: DC 24 V/2,5 A



Input	
Input	1-phase AC or DC
Rated voltage value $V_{in}$ rated	100 ... 230 V
Voltage range AC	85 ... 264 V
Input voltage	
• at DC	110 ... 300 V
Wide-range input	Yes
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering	at $V_{in} = 230$ V
Mains buffering at $I_{out}$ rated, min.	20 ms; at $V_{in} = 230$ 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 100 V	1.21 A
• at rated input voltage 230 V	0.67 A
Switch-on current limiting (+25 °C), max.	31 A
$I^2t$ , max.	2.4 A <sup>2</sup> ·s
Built-in incoming fuse	internal

Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 16 A characteristic B or from 10 A characteristic C
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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.	0.2 %
Residual ripple peak-peak, max.	200 mV
Residual ripple peak-peak, typ.	55 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	300 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	50 mV
Adjustment range	22.2 ... 26.4 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for output voltage OK
On/off behavior	Overshoot of $V_{out}$ approx. 1 %
Startup delay, max.	0.7 s
Voltage rise, typ.	100 ms
Rated current value $I_{out}$ rated	2.5 A
Current range	0 ... 2.5 A
• Note	+60 ... +70 °C: Derating 1.6%/K; at +70 °C $I_{out}$ rated 2.1 A
Supplied active power typical	60 W
Parallel switching for enhanced performance	Yes; Start-up with single nominal load only
Numbers of parallel switchable units for enhanced performance	2

  

Efficiency	
Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	87 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	9 W
Power loss [W] during no-load operation maximum	0.75 W

  

Closed-loop control	
Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.	0.1 %
Dynamic load smoothing ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ typ.	3 %
Load step setting time 10 to 90%, typ.	4 ms
Load step setting time 90 to 10%, typ.	4 ms

  

Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950-1
Current limitation, typ.	3 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart

Overload/short-circuit indicator	-
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### 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	0.4 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; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310)
Explosion protection	IECEX Ex nA IIC T4 Gc; ATEX (EX) II 3G Ex nA IIC T4; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T4
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL

### EMC

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

### environmental conditions

Ambient temperature	
• during operation	-20 ... +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: Removable screw terminal, each for 1 x 0.5 ... 2.5 mm <sup>2</sup>
• Output	+ : 1 screw terminal for 0.5 ... 2.5 mm <sup>2</sup> ; - : 2 screw terminals for 0.5 ... 2.5 mm <sup>2</sup>
• Auxiliary	-
Width of the enclosure	45 mm
Height of the enclosure	80 mm
Depth of the enclosure	100 mm

Required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	0.22 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Removable spring-type terminal 6EP1971-5BA00
MTBF at 40 °C	2 881 014 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)