



SITOP PSU100C 24 V/2.5 A STABILIZED POWER SUPPLY INPUT:  
AC 120-230 V (DC 110-300 V) OUTPUT: DC 24 V/2.5 A

### Technical specifications

Product	SITOP PSU100C
Power supply, type	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 for DC	110 ... 300 V
Wide-range input	Yes
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering at $I_{out}$ rated, min.	20 ms; at $V_{in} = 230$ V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 100 V Rated value	1.21 A
Input current at rated input voltage 230 V Rated value	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

### 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 Vout approx. 1 %
Startup delay, max.	0.7 s
Voltage rise, typ.	100 ms
Rated current value Iout rated	2.5 A
Current range	0 ... 2.5 A
• Note	+55 ... +70 °C: Derating 3,5%/K
Active power supplied 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 Vout rated, Iout rated, approx.	87 %
Power loss at Vout rated, Iout rated, approx.	9 W
Active power loss during no-load operation maximum	0.75 W

#### Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15$ %), max.	0.1 %
Dynamic load smoothing (Iout: 10/90/10 %), Uout $\pm$ 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	-

#### Safety

Primary/secondary isolation	Yes
Galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178

Protection class	Class I
Leakage current maximum	3.5 mA
Leakage 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; cURus-Recognized (UL 60950, CSA C22.2 No. 60950), File E151273, NEC class 2 (acc. to UL 1310)
Explosion protection	ATEX (EX) II 3G Ex nA IIC T4; 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	Yes
FM approval	-
CB approval	Yes
Marine approval	GL, ABS
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 during operation	-20 ... +70 °C
<ul style="list-style-type: none"> <li>Note</li> </ul>	with natural convection
Ambient temperature during transport	-40 ... +85 °C
Ambient temperature 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: Removable screw terminal, each for 1 x 0.5 ... 2.5 mm <sup>2</sup>
Connections 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>
Connections Auxiliary	-
Width of the enclosure	45 mm
Height of the enclosure	80 mm
Depth of the enclosure	100 mm
Weight, approx.	0.22 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	Removable spring-type terminal 6EP1971-5BA00
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)