



SITOP PSU100C 12 V/2 A STABILIZED POWER SUPPLY INPUT:
AC 100-230 V (DC 110-300 V) OUTPUT: DC 12 V/2 A

Technical specifications

Product	SITOP PSU100C
Power supply, type	12 V/2 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	0.63 A
Input current at rated input voltage 230 V Rated value	0.31 A
Switch-on current limiting (+25 °C), max.	33 A
I^2t , max.	1.2 A ² ·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	12 V

Total tolerance, static \pm	3 %
Residual ripple peak-peak, max.	200 mV
Residual ripple peak-peak, typ.	40 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	300 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	50 mV
Adjustment range	10.5 ... 12.9 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. 5 %
Startup delay, max.	0.6 s
Voltage rise, typ.	10 ms
Rated current value Iout rated	2 A
Current range	0 ... 2 A
• Note	+55 ... +70 °C: Derating 3%/K
Active power supplied typical	24 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.	82 %
Power loss at Vout rated, Iout rated, approx.	5.8 W
Active power loss during no-load operation maximum	0.75 W

Closed-loop control

Dynamic mains compensation (Vin rated ± 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.	3 ms

Protection and monitoring

Output overvoltage protection	Yes, according to EN 60950-1
Current limitation, typ.	2.4 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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
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	No
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
• Note	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 ²
Connections Output	+: 1 screw terminal for 0.5 ... 2.5 mm ² ; -: 2 screw terminals for 0.5 ... 2.5 mm ²
Connections Auxiliary	-
Width of the enclosure	30 mm
Height of the enclosure	80 mm
Depth of the enclosure	100 mm
Weight, approx.	0.12 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)