



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 V ... 230 V
Voltage range	85 V ... 264 V
Input voltage / at DC	110 V ... 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
Mains buffering	at $V_{in} = 230$ V
Rated line frequency	50 Hz / 60 Hz
Rated line range	47 Hz ... 63 Hz
Input current / at nominal level of the input voltage 100 V / nominal value	1.21 A
Input current / at nominal level of the input voltage 230 V	0.67 A
Switch-on current limiting (+25 °C), max.	31 A
I^2t , max.	2.4 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	24 V
Total tolerance, static $\pm$	3 %
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 V ... 26.4 V
Product feature / 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 A ... 2.5 A
• Note	2.5 A up to +50 °C, 0.75 A up to +70 °C
delivered active power / typ.	60 W
Parallel switching for enhanced performance	Yes
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
Closed-loop control	
Dynamic mains compensation (V_{in} rated ± 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
Current limitation, typ.	3 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes

Potential separation	Safety extra low output voltage Vout according 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)
Explosion protection	ATEX (EX) II 3G Ex nA IIC T4
FM approval	-
CB approval	Yes
Marine approval	GL and ABS in process
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 / in operation	-20 °C ... 70 °C
• Note	with natural convection
Ambient temperature / on transport	-40 °C ... 85 °C
Ambient temperature / in storage	-40 °C ... 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 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 housing	45 mm
Height / of the housing	80 mm
Depth / of the housing	100 mm
Installation width	45 mm
Mounting height	180 mm
Weight, approx.	0.22 kg
Product feature / of the housing / housing for side-by-side mounting	Yes
Type of mounting / wall mounting	No
Type of fixing / cap rail mounting	Yes
Type of mounting / S7-300 rail mounting	No

