



SITOP PSU100L 24 V/2.5 A STABILIZED POWER SUPPLY
INPUT: 120/230 V AC OUTPUT: 24 V/2.5 A DC

Technical specifications

Product	SITOP PSU100L
Power supply, type	24 V/2.5 A
Input	
Input	1-phase AC
Supply voltage / 1 / at AC / nominal value	120 V
Supply voltage / 2 / at AC / nominal value	230 V
Voltage range	
• Note	Set by means of selector switch on the device
Input voltage / 1 / at AC	93 ... 132 V
Input voltage / 2 / at AC	187 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at Iout rated, min.	20 ms
Mains buffering	at Vin = 93/187 V
Rated line frequency	50 / 60 Hz
Rated line range	47 ... 63 Hz
Input current / at nominal level of the input voltage 120 V	1.1 A
Input current / at nominal level of the input voltage 230 V	0.65 A
Switch-on current limiting (+25 °C), max.	27 A
Duration of current limiting / at 25 °C / typical	3 ms

I ² t, max.	0.3 A ² ·s
Built-in incoming fuse	T 2 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 3 A, characteristic C
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.	0.5 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	10 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	50 mV
Adjustment range	22.8 ... 26.4 V
Product feature / output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
On/off behavior	Overshoot of V _{out} approx. 4 %
Startup delay, max.	1.5 s
Voltage rise, typ.	150 ms
Rated current value I _{out} rated	2.5 A
Current range	0 ... 2.5 A
• Note	2.5 A up to +45 °C, 1.75 A up to +60 °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.	85 %
Power loss at V _{out} rated, I _{out} rated, approx.	9 W
Closed-loop control	
Dynamic mains compensation (V _{in} rated ±15 %), max.	0.3 %
Dynamic load smoothing (I _{out} : 10/90/10 %), U _{out} ± typ.	2 %
Load step setting time 10 to 90%, typ.	0.5 ms
Load step setting time 90 to 10%, typ.	0.7 ms
Protection and monitoring	
Output overvoltage protection	< 33 V
Current limitation, typ.	2.6 A
Characteristic feature of the output / short-circuit protected	Yes
Short-circuit protection	Constant current characteristic

Enduring short circuit current / Effective level / typical	4 A
Overload/short-circuit indicator	-
Safety	
Primary/secondary isolation	Yes
Potential separation	Safety extra-low output voltage Uout acc. 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
Explosion protection	-
FM approval	-
Marine approval	-
Degree of protection (EN 60529)	IP20
EMC	
Emitted interference	EN 55022 Class A
Supply harmonics limitation	not applicable
Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature / in operation	0 ... 60 °C
• Note	with natural convection
Ambient temperature / on transport	-40 ... +85 °C
Ambient temperature / in 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: 1 screw terminal each for 0.5 ... 2.5 mm ² single-core/finely stranded
Connections / Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm ²
Connections / Auxiliary	-
Width / of the housing	32.5 mm
Height / of the housing	125 mm
Depth / of the housing	125 mm
Mounting height	225 mm
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

