



SITOP PSU100L 24 V/10 A STABILIZED POWER SUPPLY INPUT:
120/230 V AC OUTPUT: 24 V/10 A DC

Technical specifications

Product	SITOP PSU100L
Power supply, type	24 V/10 A
Input	
Input	1-phase AC
Supply voltage 1 with AC Rated value	120 V
Supply voltage 2 with AC Rated value	230 V
• Note	Set by means of selector switch on the device
Input voltage 1 with AC	93 ... 132 V
Input voltage 2 with AC	187 ... 264 V
Wide-range input	No
Overvoltage resistance	$2.3 \times V_{in}$ rated, 1.3 ms
Mains buffering at I _{out} rated, min.	20 ms; at $V_{in} = 93/187$ V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	4.1 A
Input current at rated input voltage 230 V Rated value	2.4 A
Switch-on current limiting (+25 °C), max.	65 A
Duration of inrush current limiting at 25 °C typical	3 ms
I ² t, max.	3.3 A ² ·s
Built-in incoming fuse	T 6.3 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C

Output	
Output	Controlled, isolated DC voltage
Rated voltage Vout 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.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	150 mV
Adjustment range	22.8 ... 26.4 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
On/off behavior	Overshoot of Vout approx. 4 %
Startup delay, max.	1.5 s
Voltage rise, typ.	170 ms
Rated current value Iout rated	10 A
Current range	0 ... 10 A
• Note	+45 ... +60 °C: Derating 2%/K
Active power supplied typical	240 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at Vout rated, Iout rated, approx.	89 %
Power loss at Vout rated, Iout rated, approx.	34 W

Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	0.3 %
Dynamic load smoothing (Iout: 10/90/10 %), Uout ± 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.	10.5 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value typical	16 A
Overload/short-circuit indicator	-

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
Leakage current typical	0.8 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	-
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	-
Degree of protection (EN 60529)	IP20

EMC

Emitted interference	EN 55022 Class A
Supply harmonics limitation	-
Noise immunity	EN 61000-6-2

Operating data

Ambient temperature during operation	0 ... 60 °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: 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 enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.75 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)