

SITOP PSU100L 24 V/20 A  
 SITOP PSU100L 24 V/20 A Stabilized power supply input: 100-240 V  
 AC output: 24 V DC/20 A



Input	
Input	1-phase AC or DC
Rated voltage value $V_{in}$ rated	100 ... 240 V
Supply voltage	
• at DC	100 ... 240 V
Input voltage	
• 1 at AC	85 ... 264 V
• at DC	88 ... 370 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 93/187$ V
Mains buffering at $I_{out}$ rated, min.	20 ms; at $V_{in} = 93/187$ V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
Input current	
• at rated input voltage 120 V	5.55 A
• at rated input voltage 230 V	2.35 A
Switch-on current limiting (+25 °C), max.	45 A
Duration of inrush current limiting at 25 °C	

• typical	15 ms
I <sup>2</sup> t, max.	3.3 A <sup>2</sup> ·s
Built-in incoming fuse	T 10 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 V <sub>out</sub> DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	1 %
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)	100 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	No overshoot of V <sub>out</sub> (soft start)
Startup delay, max.	1.5 s
Voltage rise, typ.	20 ms
Rated current value I <sub>out</sub> rated	20 A
Current range	0 ... 20 A
• Note	+45 ... +70 °C: Derating 2.5%/K
Supplied active power typical	480 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

### Efficiency

Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	92 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	45 W

### Closed-loop control

Dynamic mains compensation (V <sub>in</sub> rated ±15 %), max.	0.5 %
Dynamic load smoothing (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> ± typ.	3 %
Load step setting time 10 to 90%, typ.	0.7 ms
Load step setting time 90 to 10%, typ.	6 ms

### Protection and monitoring

Output overvoltage protection	< 33 V
Current limitation, typ.	24 A

Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	24 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 <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.8 mA
Degree of protection (EN 60529)	IP20

### Approvals

CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-
FM approval	-
CB approval	Yes
Marine approval	-

### EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

### environmental conditions

Ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul>	-25 ... +70 °C with natural convection -40 ... +85 °C -40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 ... 95% no condensation

### Mechanics

Connection technology	screw-type terminals
Connections <ul style="list-style-type: none"> <li>• Supply input</li> <li>• Output</li> <li>• Auxiliary</li> </ul>	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup> -
Width of the enclosure	110 mm
Height of the enclosure	125 mm

Depth of the enclosure	125 mm
Required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	1.8 kg
Product feature 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)