SIEMENS

Data sheet 6EP1333-1AL12

SITOP POWER/1AC/24VDC/5A/FLAT DESIGN
SITOP power 5 A, Special Line Stabilized power supply input: 120/230 V AC, output: 24 V DC/5 A



Input	
Input	1-phase AC
• Note	Set by means of selector switch on the device
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	170 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering	at Vin = 93/187 V
Mains buffering at Iout rated, min.	20 ms; at Vin = 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	2.2 A
• at rated input voltage 230 V	1.2 A

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Switch-on current limiting (+25 °C), max.	32 A
duration of inrush current limiting at 25 °C	
• maximum	3 ms
I²t, max.	0.8 A²·s
Built-in incoming fuse	T 3,15 A/250 V (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 6 A characteristic C

Output

Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static ±	1 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.5 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	40 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	100 mV
Adjustment range	22 ... 29 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 Vout (soft start)
Startup delay, max.	2 s
Voltage rise, typ.	40 ms
Rated current value Iout rated	5 A
Current range	0 ... 5 A
supplied active power typical	120 W
short-term overload current	
• on short-circuiting during the start-up typical	20 A
• at short-circuit during operation typical	20 A
duration of overloading capability for excess current	
• on short-circuiting during the start-up	500 ms
• at short-circuit during operation	500 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at Vout rated, Iout rated, approx.	88 %
Power loss at Vout rated, Iout rated, approx.	17 W

Closed-loop control

Dynamic mains compensation (Vin rated ±15 %), max.	0.3 %

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Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.	0.5 %
Load step setting time 50 to 100%, typ.	0.1 ms
Load step setting time 100 to 50%, typ.	0.1 ms

Protection and monitoring	
Output overvoltage protection	Additional control loop, shutdown at approx. 33 V, automatic restart
Current limitation	5.5 ... 6.5 A
property of the output short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
• maximum	5 A
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
• typical	0.26 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	-
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	No
Marine approval	-

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

environmental conditions	
ambient temperature	
• during operation	0 ... 60 °C
— Note	with natural convection
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 … 95% no condensation

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Mechanics	
Connection technology	screw-type terminals
Connections	
• Supply input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded
• Output	L+, M: 3 screw terminals each for 0.5 ... 2.5 mm²
• Auxiliary	-
width of the enclosure	160 mm
height of the enclosure	130 mm
depth of the enclosure	60 mm
required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	0.6 kg
product feature of the enclosure housing can be lined up	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	1 250 000 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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