SIEMENS

Data sheet 6EP1336-2BA10

SITOP PSU100S 20 A STABILIZED POWER SUPPLY INPUT: 120/230 V AC OUTPUT: 24 V/20 A DC

Technical specifications	
Product	SITOP PSU100S
Power supply, type	24 V/20 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	Automatic range selection
Input voltage 1 with AC	85 ... 132 V
Input voltage 2 with AC	176 ... 264 V
Wide-range input	No
Overvoltage resistance	2.3 × Vin rated, 1.3 ms
Mains buffering at Iout rated, min.	20 ms; at Vin = 120/230 V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 120 V Rated value	7.5 A
Input current at rated input voltage 230 V Rated value	3.5 A
Switch-on current limiting (+25 °C), max.	11 A
I^2t, max.	10 $A^2 \cdot s$
Built-in incoming fuse	T 10 A (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C or circuit-breaker 3RV2411-1JA10 (120 V) or 3RV2411-1FA10 (230 V)

Output	
Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.5 %
Static load balancing, approx.	1 %
Residual ripple peak-peak, max.	150 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Adjustment range	24 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 480 W
Status display	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 50 V DC/ 0.3 A) for "24 V OK"
On/off behavior	No overshoot of Vout (soft start)
Startup delay, max.	1.5 s
Voltage rise, typ.	50 ms
Voltage increase time of the output voltage maximum	500 ms
Rated current value Iout rated	20 A
Current range	0 ... 20 A
• Note	24 A up to +45°C; +60 ... +70 °C: Derating 5%/K
Active power supplied typical	480 W
Short-term overload current on short-circuiting during the start-up typical	35 A
Duration of overloading capability for excess current on short-circuiting during the start-up	100 ms
Short-term overload current at short-circuit during operation typical	35 A
Duration of overloading capability for excess current at short-circuit during operation	100 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at Vout rated, Iout rated, approx.	90 %
Power loss at Vout rated, Iout rated, approx.	53 W

Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.	3 %
Setting time maximum	10 ms

Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950-1

Current limitation, typ.	21 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current RMS value maximum	7 A
Overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
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
Leakage current typical	1 mA
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; in preparation: cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
Explosion protection	ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T4
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	GL
Degree of protection (EN 60529)	IP20

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

Operating data	
Ambient temperature during operation	0 ... 70 °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	L1, N, PE: 1 screw terminal each for 0.2 ... 4 mm² single-core/finely stranded
Connections Output	+, -: 2 screw terminals each for 0.2 ... 4 mm²
Connections Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm²
Width of the enclosure	115 mm

Height of the enclosure	145 mm
Depth of the enclosure	150 mm
Weight, approx.	2.4 kg
Product property of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
Mechanical accessories	Device identification label 20 mm × 7 mm, pastel-turpuoise 3RT1900-1SB20
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)