SIEMENS

Data sheet 6EP1332-2BA20

SITOP PSU100S/1AC/24VDC/2.5A

SITOP PSU100S 24 V/2.5 A stabilized power supply input: 120/230 V AC output: 24 V DC/2.5 A *Ex approval no longer available*

Input	
type of the power supply network	1-phase AC
supply voltage at AC	
● initial value	Automatic range selection
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
design of input wide range input	No
overvoltage overload capability	2.3 × Vin rated, 1.3 ms
operating condition of the mains buffering	at Vin = 93/187 V
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at Vin = 93/187 V
line frequency	
● 1 rated value	50 Hz
● 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
● at rated input voltage 120 V	1.25 A
● at rated input voltage 230 V	0.74 A
current limitation of inrush current at 25 °C maximum	33 A
I2t value maximum	0.4 A²·s
fuse protection type	T 3,15 A/250 V (not accessible)
● in the feeder	Recommended miniature circuit breaker: from 3 A characteristic C
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
● at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
● on slow fluctuation of input voltage	0.1 %
● on slow fluctuation of ohm loading	1 %
residual ripple	
● maximum	150 mV
● typical	30 mV
voltage peak	
● maximum	240 mV
● typical	70 mV

adjustable output voltage	22.8 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for 24 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
behavior of the output voltage when switching on	Overshoot of Vout < 3 %
response delay maximum	0.3 s
voltage increase time of the output voltage	
● typical	15 ms
output current	
● rated value	2.5 A
● rated range	0 ... 3 A; 3 A up to +45°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	60 W
short-term overload current	
● on short-circuiting during the start-up typical	9 A
● at short-circuit during operation typical	8 A
duration of overloading capability for excess current	
● on short-circuiting during the start-up	800 ms
● at short-circuit during operation	100 ms
product feature	
● bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	85 %
power loss [W]	
● at rated output voltage for rated value of the output current typical	10 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.3 %
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	5 %
setting time	
● load step 10 to 90% typical	1 ms
● load step 90 to 10% typical	1 ms
Protection and monitoring	
design of the overvoltage protection	protection against overvoltage in case of internal fault Vout < 33 V
response value current limitation	3 ... 3.4 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
enduring short circuit current RMS value	
● typical	3.4 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
display version for overload and short circuit	-
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
● maximum	3.5 mA
● typical	0.4 mA
protection class IP	IP20
Approvals	
certificate of suitability	
● CE marking	Yes
● UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
● CSA approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
● cCSAus, Class 1, Division 2	No
● ATEX	No
certificate of suitability	
● IECEx	No

● NEC Class 2	No
● ULhazloc approval	No
● FM registration	No
type of certification CB-certificate	Yes
certificate of suitability	
● EAC approval	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	BV, DNV GL
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● French marine classification society (BV)	Yes
● DNV GL	Yes
● Lloyds Register of Shipping (LRS)	No
● Nippon Kaiji Kyokai (NK)	No
EMC	
standard	
● for emitted interference	EN 55022 Class B
● for mains harmonics limitation	not applicable
● for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
● during operation	-25 ... +70 °C; with natural convection
● during transport	-40 ... +85 °C
● during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 … 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
● at input	L, N, PE: 1 screw terminal each for 0.5 ... 2.5 mm² single-core/finely stranded
● at output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm²
● for auxiliary contacts	Alarm signals: 2 screw terminals for 0.5 ... 2.5 mm²
● for signaling contact	2 screw terminals for 0.5 ... 2.5 mm²
width of the enclosure	32.5 mm
height of the enclosure	125 mm
depth of the enclosure	120 mm
required spacing	
● top	50 mm
● bottom	50 mm
● left	0 mm
● right	0 mm
net weight	0.32 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
electrical accessories	Buffer module
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	1 804 044 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)