

Siemens 6EP1333-2BA20 Manual

Brand	Siemens
Product Series	Siemens
Product Type	of the power supply network 1-phase AC

Description

6EP1333-2BA20

SITOP PSU100S/1AC/24VDC/5A

SITOP PSU100S 24 V/5 A stabilized power supply input: 120/230 V AC output: 24 V DC/5 A

input

type of the power supply network 1-phase AC

supply voltage at AC Automatic range selection

supply voltage 120 V/230 V

input voltage 1 at AC 85 ... 132 V

input voltage 2 at AC 170 ... 264 V

wide range input No

overvoltage overload capability 2.3 A Vin rated 1.3 ms

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 50/60 Hz

line frequency 47 ... 63 Hz

input current

- at rated input voltage 120 V 2.34 A

- at rated input voltage 230 V 1.36 A

current limitation of inrush current at 25 °C maximum 40 A

I²t value maximum 1 A²·s

fuse protection type T 3,15 A/250 V (not accessible)

fuse protection type in the feeder Recommended miniature circuit breaker: from 6 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

output voltage adjustable Yes; via potentiometer

adjustable output voltage 22.8 ... 28 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

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- typical 30 mV

voltage peak

- maximum 240 mV
- typical 140 mV

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 $V_{out} < 3\%$

response delay maximum 0.3 s

voltage increase time of the output voltage

- typical 15 ms

output current

- rated value 5 A
- rated range 0 ... 6 A; 6 A up to +45°C; +60 ... +70 °C: Derating 1.6%/K

supplied active power typical 144 W

short-term overload current

- on short-circuiting during the start-up typical 18 A
- at short-circuit during operation typical 18 A

duration of overloading capability for excess current

- on short-circuiting during the start-up 800 ms
- at short-circuit during operation 800 ms

bridging of equipment Yes

number of parallel-switched equipment resources for increasing the power

2

efficiency

efficiency in percent 88 %

power loss [W]

- at rated output voltage for rated value of the output

current typical

16 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

3 %

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 $V_{out} < 33\text{ V}$

property of the output short-circuit proof Yes

design of short-circuit protection Constant current characteristic

response value current limitation 6 ... 7.1 A

overcurrent overload capability

- in normal operation overload capability 150 % I_{out} rated up to 5 s/min

enduring short circuit current RMS value

- typical 7.1 A

safety

galvanic isolation between input and output Yes

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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

EMC

standard

- for emitted interference EN 55022 Class B
- for mains harmonics limitation EN 61000-3-2
- for interference immunity EN 61000-6-2

standards, specifications, 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)
- UKCA marking Yes
- EAC approval Yes
- NEC Class 2 No

type of certification

BIS Yes; R-41188271

- CB-certificate Yes

MTBF at 40 °C 1 998 441 h

standards, specifications, approvals hazardous environments

certificate of suitability

- IECEx No
- ATEX No
- ULhazloc approval No
- cCSAus, Class 1, Division 2 No
- FM registration No

standards, specifications, approvals marine classification

shipbuilding approval Yes

Marine classification association

- American Bureau of Shipping Europe Ltd. (ABS) No
- French marine classification society (BV) Yes
- Det Norske Veritas (DNV) Yes
- Lloyds Register of Shipping (LRS) No

standards, specifications, approvals Environmental Product Declaration

Environmental Product Declaration Yes

Global Warming Potential [CO2 eq]

- total 513.7 kg
- during manufacturing 12.9 kg
- during operation 500.4 kg
- after end of life 0.35 kg

ambient conditions

ambient temperature

- during operation -25 ... +70 °C; with natural convection

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- during transport -40 ... +85 °C
- during storage -40 ... +85 °C

environmental category according to IEC 60721 Climate class 3K3, 5 ... 95% no condensation

connection method

type of electrical connection screw terminal

- 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

mechanical data

width × height × depth of the enclosure 50 × 125 × 120 mm

installation width × mounting height 50 mm × 225 mm

required spacing

- top 50 mm
- bottom 50 mm
- left 0 mm
- right 0 mm

fastening method Snaps onto DIN rail EN 60715 35x7.5/15

- standard rail mounting Yes
- S7 rail mounting No
- wall mounting No

housing can be lined up Yes

net weight 0.5 kg

accessories

electrical accessories Buffer module

mechanical accessories Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20

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