SIEMENS

Data sheet 6EP1437-2BA20



SITOP PSU300S/3AC/24VDC/40A

SITOP PSU300S 40 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/40 A

General information	
Technical Product Detail Page	https://i.siemens.com/1P6EP1437-2BA20
input	
type of the power supply network	3-phase AC
supply voltage at AC	
● minimum rated value	400 V
● maximum rated value	500 V
● initial value	340 V
● full-scale value	550 V
wide range input	Yes
buffering time for rated value of the output current in the event of power failure minimum	6 ms
operating condition of the mains buffering	at Vin = 400 V
line frequency	50/60 Hz
line frequency	47 ... 63 Hz
input current	
● at rated input voltage 400 V	2 A
● at rated input voltage 500 V	1.7 A
current limitation of inrush current at 25 °C maximum	60 A
I2t value maximum	3.4 A²·s
fuse protection type	none
fuse protection type in the feeder	Required: 3-pole connected miniature circuit breaker 10 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ)
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	24 ... 28 V; max. 960 W
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
● on slow fluctuation of input voltage	1 %
● on slow fluctuation of ohm loading	2 %
residual ripple	
● maximum	150 mV
voltage peak	
● maximum	240 mV

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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	No overshoot of Vout (soft start)
response delay maximum	1.5 s
voltage increase time of the output voltage	
● typical	15 ms
● maximum	500 ms
output current	
● rated value	40 A
● rated range	0 ... 40 A; 48 A up to +45°C; +60 ... +70 °C: Derating 3%/K
supplied active power typical	960 W
short-term overload current	
● on short-circuiting during the start-up typical	65 A
● at short-circuit during operation typical	65 A
duration of overloading capability for excess current	
● on short-circuiting during the start-up	100 ms
● at short-circuit during operation	100 ms
bridging of equipment	Yes
number of parallel-switched equipment resources for increasing the power	2
efficiency	
efficiency in percent	91.5 %
power loss [W]	
● at rated output voltage for rated value of the output current typical	89 W
closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	3 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	1.5 %
setting time	
● load step 50 to 100% typical	1 ms
● load step 100 to 50% typical	1 ms
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
● maximum	10 ms
protection and monitoring	
design of the overvoltage protection	protection against overvoltage in case of internal fault Vout < 35 V
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
● typical	50 A
overcurrent overload capability	
● in normal operation	overload capability 150 % Iout rated up to 5 s/min
enduring short circuit current RMS value	
● maximum	14 A
safety	
galvanic isolation between input and output	Yes
galvanic isolation	Output voltage: SELV, ES1 (IEC 62368-1), DVC As (IEC 61204-7)
operating resource protection class	Class I
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	

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● CE marking	Yes
● UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
● UKCA marking	Yes
● EAC approval	Yes
● NEC Class 2	No
type of certification	
● BIS	Yes; R-41183539
● CB-certificate	Yes
MTBF at 40 °C	500 000 h
standards, specifications, approvals hazardous environments	
certificate of suitability	
● IECEx	No
● ATEX	No
● ULhazloc approval	No
● FM registration	No
standards, specifications, approvals marine classification	
shipbuilding approval	Yes
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● French marine classification society (BV)	No
● 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	2 847 kg
● during manufacturing	61.2 kg
● during operation	2 783.5 kg
● after end of life	0.92 kg
ambient 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
connection method	
type of electrical connection	screw terminal
● at input	L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm² single-core/finely stranded
● at output	+, -: 2 screw terminals each for 0.5 ... 10 mm²
● for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.05 ... 2.5 mm²
mechanical data	
width × height × depth of the enclosure	145 × 145 × 150 mm
installation width × mounting height	145 mm × 225 mm
required spacing	
● top	40 mm
● bottom	40 mm
● left	0 mm
● right	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x15
● DIN-rail mounting	Yes
● S7 rail mounting	No
● wall mounting	No
housing can be lined up	Yes
net weight	3.1 kg
accessories	
electrical accessories	Redundancy module, buffer module, selectivity module, DC UPS
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
further information internet links	

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internet link	
● to website: Industry Mall	https://mall.industry.siemens.com
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to web page: power supplies	https://siemens.com/sitop
● to website: CAx-Download-Manager	https://siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com

additional information

other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

security information

security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Classifications

	Version	Classification
eClass	16	27-04-07-01
eClass	14	27-04-07-01
eClass	12	27-04-07-01
eClass	9.1	27-04-07-01
eClass	9	27-04-07-01
eClass	8	27-04-90-02
eClass	7.1	27-04-90-02
eClass	6	27-04-90-02
ETIM	10	EC002540
ETIM	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

Approvals Certificates

Environmental Product Declaration

● global warming potential [CO2 eq] / during manufacturing	61.2 kg
● global warming potential [CO2 eq] / during operation	2783.5 kg
● global warming potential [CO2 eq] / after end of life	0.92 kg
● global warming potential [CO2 eq] / total	2847 kg

Environment	General Product Approval				
EPD	CB	Manufacturer Declaration	Declaration of Conformity	UKCA	CE EG-Konf.

General Product Approval	Maritime application

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