



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://l.siemens.com/1P6EP1437-2BA20>

input

type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> • minimum rated value • maximum rated value • initial value • full-scale value 	<p>400 V</p> <p>500 V</p> <p>340 V</p> <p>550 V</p>
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 $V_{in} = 400\text{ V}$
line frequency	50/60 Hz
line frequency	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> • at rated input voltage 400 V • at rated input voltage 500 V 	<p>2 A</p> <p>1.7 A</p>
current limitation of inrush current at 25 °C maximum	60 A
I ² t value maximum	3.4 A ² ·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	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • on slow fluctuation of input voltage • on slow fluctuation of ohm loading 	<p>1 %</p> <p>2 %</p>
residual ripple	
<ul style="list-style-type: none"> • maximum 	150 mV
voltage peak	
<ul style="list-style-type: none"> • maximum 	240 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	No overshoot of Vout (soft start)
response delay maximum	1.5 s
voltage increase time of the output voltage <ul style="list-style-type: none"> • typical • maximum 	15 ms 500 ms
output current <ul style="list-style-type: none"> • rated value • rated range 	40 A 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 <ul style="list-style-type: none"> • on short-circuiting during the start-up typical • at short-circuit during operation typical 	65 A 65 A
duration of overloading capability for excess current <ul style="list-style-type: none"> • on short-circuiting during the start-up • at short-circuit during operation 	100 ms 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] <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • load step 50 to 100% typical • load step 100 to 50% typical 	1 ms 1 ms
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	3 %
setting time <ul style="list-style-type: none"> • load step 10 to 90% typical • load step 90 to 10% typical • maximum 	1 ms 1 ms 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 <ul style="list-style-type: none"> • typical 	Electronic shutdown, automatic restart 50 A
overcurrent overload capability <ul style="list-style-type: none"> • in normal operation 	overload capability 150 % Iout rated up to 5 s/min
enduring short circuit current RMS value <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity 	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
standards, specifications, approvals	
certificate of suitability	

<ul style="list-style-type: none"> • CE marking • UL approval • UKCA marking • EAC approval • NEC Class 2 	<p>Yes</p> <p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>Yes</p> <p>Yes</p> <p>No</p>
<p>type of certification</p> <ul style="list-style-type: none"> • BIS • CB-certificate 	<p>Yes; R-41183539</p> <p>Yes</p>
<p>MTBF at 40 °C</p>	<p>500 000 h</p>
<p>standards, specifications, approvals hazardous environments</p>	
<p>certificate of suitability</p> <ul style="list-style-type: none"> • IECEx • ATEX • ULhazloc approval • FM registration 	<p>No</p> <p>No</p> <p>No</p> <p>No</p>
<p>standards, specifications, approvals marine classification</p>	
<p>shipbuilding approval</p>	<p>Yes</p>
<p>Marine classification association</p> <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Lloyds Register of Shipping (LRS) 	<p>Yes</p> <p>No</p> <p>Yes</p> <p>No</p>
<p>standards, specifications, approvals Environmental Product Declaration</p>	
<p>Environmental Product Declaration</p>	<p>Yes</p>
<p>global warming potential [CO2 eq]</p> <ul style="list-style-type: none"> • total • during manufacturing • during operation • after end of life 	<p>2 847 kg</p> <p>61.2 kg</p> <p>2 783.5 kg</p> <p>0.92 kg</p>
<p>ambient conditions</p>	
<p>ambient temperature</p> <ul style="list-style-type: none"> • during operation • during transport • during storage 	<p>-25 ... +70 °C; with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
<p>environmental category according to IEC 60721</p>	<p>Climate class 3K3, 5 ... 95% no condensation</p>
<p>connection method</p>	
<p>type of electrical connection</p> <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts 	<p>screw terminal</p> <p>L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm² single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.5 ... 10 mm²</p> <p>13, 14 (alarm signal): 1 screw terminal each for 0.05 ... 2.5 mm²</p>
<p>mechanical data</p>	
<p>width × height × depth of the enclosure</p>	<p>145 × 145 × 150 mm</p>
<p>installation width × mounting height</p>	<p>145 mm × 225 mm</p>
<p>required spacing</p> <ul style="list-style-type: none"> • top • bottom • left • right 	<p>40 mm</p> <p>40 mm</p> <p>0 mm</p> <p>0 mm</p>
<p>fastening method</p> <ul style="list-style-type: none"> • DIN-rail mounting • S7 rail mounting • wall mounting 	<p>Snaps onto DIN rail EN 60715 35x15</p> <p>Yes</p> <p>No</p> <p>No</p>
<p>housing can be lined up</p>	<p>Yes</p>
<p>net weight</p>	<p>3.1 kg</p>
<p>accessories</p>	
<p>electrical accessories</p>	<p>Redundancy module, buffer module, selectivity module, DC UPS</p>
<p>mechanical accessories</p>	<p>Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20</p>
<p>further information internet links</p>	

internet link	<ul style="list-style-type: none"> • 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
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additional information

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

security information	<p>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)</p>
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Classifications

	Version	Classification
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	
<ul style="list-style-type: none"> • global warming potential [CO2 eq] / during manufacturing • global warming potential [CO2 eq] / during operation • global warming potential [CO2 eq] / after end of life • global warming potential [CO2 eq] / total 	<p>61.2 kg 2783.5 kg 0.92 kg 2847 kg</p>

Environment General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval Maritime application

[China RoHS](#)



[BIS CRS](#)



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