



SITOP PSU300S/3AC/24VDC/20A

SITOP PSU300S 20 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A

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 $V_{in} = 400\text{ V}$
line frequency	50/60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 400 V	1.2 A
• at rated input voltage 500 V	1 A
current limitation of inrush current at 25 °C maximum	36 A
I <sup>2</sup> t value maximum	0.9 A <sup>2</sup> s
fuse protection type	none
fuse protection type in the feeder	Required: 3-pole connected miniature circuit breaker 6 ... 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. 480 W
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
• on slow fluctuation of input voltage	0.5 %
• on slow fluctuation of ohm loading	1 %
residual ripple	
• maximum	150 mV
voltage peak	
• 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 $V_{out}$ (soft start)
response delay maximum	1.5 s

voltage increase time of the output voltage	
• typical	30 ms
• maximum	500 ms
output current	
• rated value	20 A
• rated range	0 ... 20 A
supplied active power typical	480 W
short-term overload current	
• on short-circuiting during the start-up typical	35 A
• at short-circuit during operation typical	35 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
<b>efficiency</b>	
efficiency in percent	91 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	47 W
<b>closed-loop control</b>	
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	3 %
setting time	
• load step 50 to 100% typical	2 ms
• load step 100 to 50% typical	2 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	2 ms
• load step 90 to 10% typical	2 ms
• maximum	10 ms
<b>protection and monitoring</b>	
design of the overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 35 \text{ V}$
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
• typical	25.5 A
overcurrent overload capability	
• in normal operation	overload capability 150 % $I_{out}$ rated up to 5 s/min
enduring short circuit current RMS value	
• maximum	7 A
<b>safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage $V_{out}$ acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
protection class IP	IP20
standard	
• for emitted interference	EN 55022 Class B
• for mains harmonics limitation	EN 61000-3-2
• for interference immunity	EN 61000-6-2
<b>standards, specifications, approvals</b>	
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)

<ul style="list-style-type: none"> <li>• CSA approval</li> </ul>	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
<ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• NEC Class 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• SEMI F47</li> </ul>	Yes
type of certification	
<ul style="list-style-type: none"> <li>• BIS</li> </ul>	Yes; R-41183539
<ul style="list-style-type: none"> <li>• CB-certificate</li> </ul>	Yes
MTBF at 40 °C	500 000 h

**standards, specifications, approvals hazardous environments**

certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX</li> </ul>	No
<ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>	No
<ul style="list-style-type: none"> <li>• cCSAus, Class 1, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• FM registration</li> </ul>	No

**standards, specifications, approvals marine classification**

shipbuilding approval	Yes
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No

**standards, specifications, approvals Environmental Product Declaration**

Environmental Product Declaration	Yes
Global Warming Potential [CO2 eq]	
<ul style="list-style-type: none"> <li>• total</li> </ul>	1 500 kg
<ul style="list-style-type: none"> <li>• during manufacturing</li> </ul>	31.6 kg
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	1 470 kg
<ul style="list-style-type: none"> <li>• after end of life</li> </ul>	0.48 kg

**ambient conditions**

ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-25 ... +60 °C; with natural convection
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation

**connection method**

type of electrical connection	screw terminal
<ul style="list-style-type: none"> <li>• at input</li> </ul>	L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm <sup>2</sup> single-core/finely stranded
<ul style="list-style-type: none"> <li>• at output</li> </ul>	+, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	13, 14 (alarm signal): 1 screw terminal each for 0.05 ... 2.5 mm <sup>2</sup>

**mechanical data**

width × height × depth of the enclosure	90 × 145 × 150 mm
installation width × mounting height	90 mm × 225 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	40 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	40 mm
<ul style="list-style-type: none"> <li>• left</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• right</li> </ul>	0 mm
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
<ul style="list-style-type: none"> <li>• standard rail mounting</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• S7 rail mounting</li> </ul>	No
<ul style="list-style-type: none"> <li>• wall mounting</li> </ul>	No
housing can be lined up	Yes
net weight	1.6 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**

internet link	
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- to website: Industry Mall
- to website: Industrial communication
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <https://mall.industry.siemens.com>
- <https://siemens.com/industrial-communication>
- <https://siemens.com/cax>
- <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](http://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	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	9	EC002540
ETIM	8	EC002540
ETIM	7	EC002540
IDEA	4	4130
UNSPSC	15	39-12-10-04

#### Approvals Certificates

##### General Product Approval



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



General Product Approval

Marine / Shipping

Environment

[BIS CRS](#)



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