



SITOP PSU300S/3AC/24VDC/10A

SITOP PSU300S 24 V/10 A Stabilized power supply input: 400-500 V 3 AC output: 24 V DC/ 10 A \*Ex approval no longer available\*

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
design of input wide range input	Yes
operating condition of the mains buffering	at $V_{in} = 400\text{ V}$
buffering time for rated value of the output current in the event of power failure minimum	7 ms
operating condition of the mains buffering	at $V_{in} = 400\text{ V}$
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 400 V	0.7 A
• at rated input voltage 500 V	0.6 A
current limitation of inrush current at 25 °C maximum	20 A
I <sup>2</sup> t value maximum	0.5 A <sup>2</sup> ·s
fuse protection type	none
• in the feeder	Required: 3-pole connected miniature circuit breaker 3 ... 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
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	0.15 %
residual ripple	
• maximum	200 mV
voltage peak	
• maximum	240 mV
adjustable output voltage	24 ... 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 240 W

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 $V_{out} < 5\%$
response delay maximum	1.5 s
voltage increase time of the output voltage <ul style="list-style-type: none"> <li>• typical</li> <li>• maximum</li> </ul>	50 ms 500 ms
output current <ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>	10 A 0 ... 10 A; 12 A up to +45°C; +60 ... +70 °C: Derating 5%/K
supplied active power typical	240 W
product feature <ul style="list-style-type: none"> <li>• bridging of equipment</li> </ul>	Yes
number of parallel-switched equipment resources for increasing the power	2
<b>Efficiency</b>	
efficiency in percent	91 %
power loss [W] <ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	23 W
<b>Closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	1 %
setting time <ul style="list-style-type: none"> <li>• load step 50 to 100% typical</li> <li>• load step 100 to 50% typical</li> </ul>	3 ms 3 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"> <li>• load step 10 to 90% typical</li> <li>• load step 90 to 10% typical</li> <li>• maximum</li> </ul>	4 ms 4 ms 10 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection <ul style="list-style-type: none"> <li>• typical</li> </ul>	protection against overvoltage in case of internal fault $V_{out} < 35\text{ V}$ 13 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Constant current characteristic
enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• maximum</li> </ul>	16 A
overcurrent overload capability in normal operation	overload capability 150 % $I_{out}$ rated up to 5 s/min
<b>Safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage $U_{out}$ acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16
operating resource protection class	Class I
protection class IP	IP20
<b>Approvals</b>	
certificate of suitability <ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> <li>• CSA approval</li> <li>• cCSAus, Class 1, Division 2</li> <li>• ATEX</li> </ul>	Yes Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1) No No
certificate of suitability <ul style="list-style-type: none"> <li>• IECEx</li> <li>• NEC Class 2</li> <li>• ULhazloc approval</li> <li>• FM registration</li> </ul>	No No No No
type of certification CB-certificate	Yes

certificate of suitability	
• EAC approval	Yes
• C-Tick	Yes
type of certification BIS	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	Yes
• French marine classification society (BV)	No
• DNV GL	Yes
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
<b>EMC</b>	
standard	
• for emitted interference	EN 55022 Class B
• for mains harmonics limitation	EN 61000-3-2
• for interference immunity	EN 61000-6-2
<b>environmental conditions</b>	
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
<b>Mechanics</b>	
type of electrical connection	screw-type terminals
• at input	L1, L2, L3, PE: 1 screw terminal each for 0.05 ... 2.5 mm <sup>2</sup> single-core/finely stranded
• at output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>
• for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup>
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	120 mm
net weight	0.7 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	Redundancy module, buffer module, selectivity module, DC UPS
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	500 000 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

