



SITOP PSU3800/3AC/12VDC/20A

SITOP PSU3800 12 V/20 A stabilized power supply input: 400-500 V 3 AC output: 12 V DC/20 A optimized for battery charging \*Ex approval no longer available\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
<ul style="list-style-type: none"> <li>• minimum rated value</li> <li>• maximum rated value</li> <li>• initial value</li> <li>• full-scale value</li> </ul>	400 V 500 V 320 V 575 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	15 ms
operating condition of the mains buffering	at $V_{in} = 400\text{ V}$
line frequency	
<ul style="list-style-type: none"> <li>• 1 rated value</li> <li>• 2 rated value</li> </ul>	50 Hz 60 Hz
line frequency	47 ... 63 Hz
input current	
<ul style="list-style-type: none"> <li>• at rated input voltage 400 V</li> <li>• at rated input voltage 500 V</li> </ul>	0.7 A 0.6 A
current limitation of inrush current at 25 °C maximum	16 A
I <sup>2</sup> t value maximum	0.8 A <sup>2</sup> ·s
fuse protection type	none
<ul style="list-style-type: none"> <li>• in the feeder</li> </ul>	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)
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	12 V
output voltage	
<ul style="list-style-type: none"> <li>• at output 1 at DC rated value</li> </ul>	12 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul style="list-style-type: none"> <li>• on slow fluctuation of input voltage</li> <li>• on slow fluctuation of ohm loading</li> </ul>	0.1 % 0.2 %
residual ripple	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	100 mV
voltage peak	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	200 mV
adjustable output voltage	12 ... 14 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 12 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 12 V OK
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	2.5 s
voltage increase time of the output voltage <ul style="list-style-type: none"> <li>• maximum</li> </ul>	500 ms
output current <ul style="list-style-type: none"> <li>• rated value</li> <li>• rated range</li> </ul>	20 A 0 ... 20 A; +60 ... +70 °C: Derating 2%/K
supplied active power typical	240 W
constant overload current <ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> </ul>	22 A
product feature <ul style="list-style-type: none"> <li>• bridging of equipment</li> </ul>	Yes; switchable characteristic
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>	24 W
<b>Closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.1 %
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>	0.2 ms 0.2 ms
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	2 %
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>	0.2 ms 0.2 ms 10 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection	< 18 V
response value current limitation typical	22 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 22 A or latching shutdown
enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	22 A
display version for overload and short circuit	LED yellow for "overload", LED red for "latching shutdown"
<b>Safety</b>	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra low output voltage Vout according to EN 60950-1
operating resource protection class	Class I
leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.9 mA
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 Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259 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
type of certification CB-certificate	Yes
certificate of suitability <ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• DNV GL</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	Yes No Yes No No
<b>EMC</b>	
standard <ul style="list-style-type: none"> <li>• for emitted interference</li> <li>• for mains harmonics limitation</li> <li>• for interference immunity</li> </ul>	EN 55022 Class B EN 61000-3-2 EN 61000-6-2
<b>environmental conditions</b>	
ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>• during transport</li> <li>• during storage</li> </ul>	-25 ... +70 °C; with natural convection -40 ... +85 °C -40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
<b>Mechanics</b>	
type of electrical connection <ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for auxiliary contacts</li> </ul>	screw-type terminals L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup> 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup> ; 15, 16 (Remote): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>
width of the enclosure	70 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing <ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	50 mm 50 mm 0 mm 0 mm
net weight	1.2 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	Buffer module
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

