



SITOP PSU8200/1AC/24VDC/5A

SITOP PSU8200 24 V/5 A stabilized power supply input: 120/230 V AC output: 24 V DC/5 A \*Ex approval no longer available\*

### Input

type of the power supply network	1-phase AC
supply voltage at AC	Automatic range selection
<ul style="list-style-type: none"> <li>initial value</li> </ul>	
supply voltage	
<ul style="list-style-type: none"> <li>1 at AC rated value</li> <li>2 at AC rated value</li> </ul>	120 V 230 V
input voltage	
<ul style="list-style-type: none"> <li>1 at AC</li> <li>2 at AC</li> </ul>	85 ... 132 V 170 ... 264 V
design of input wide range input	No
operating condition of the mains buffering	at $V_{in} = 120/230\text{ V}$
buffering time for rated value of the output current in the event of power failure minimum	35 ms
operating condition of the mains buffering	at $V_{in} = 120/230\text{ V}$
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 120 V</li> <li>at rated input voltage 230 V</li> </ul>	2.1 A 1.2 A
current limitation of inrush current at 25 °C maximum	10 A
I <sup>2</sup> t value maximum	0.2 A <sup>2</sup> ·s
fuse protection type	T 3.15 A (not accessible)
<ul style="list-style-type: none"> <li>in the feeder</li> </ul>	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V

### 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"> <li>at output 1 at DC rated value</li> </ul>	24 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>	50 mV
voltage peak	
<ul style="list-style-type: none"> <li>maximum</li> </ul>	200 mV

adjustable output voltage	24 ... 28.8 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 120 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 Vout approx. 3 %
response delay maximum	1.5 s
voltage increase time of the output voltage	
• typical	30 ms
output current	
• rated value	5 A
• rated range	0 ... 5 A; As of Ua>24 V: 4% [Ia]/V [Ua]; at Ue<100 V/<200 V: 80% Ia rated
supplied active power typical	120 W
short-term overload current	
• at short-circuit during operation typical	15 A
duration of overloading capability for excess current	
• at short-circuit during operation	25 ms
constant overload current	
• on short-circuiting during the start-up typical	6 A
product feature	
• bridging of equipment	Yes; switchable characteristic
number of parallel-switched equipment resources for increasing the power	2

### Efficiency

efficiency in percent	93 %
power loss [W]	
• at rated output voltage for rated value of the output current typical	9 W
• during no-load operation maximum	1.5 W

### Closed-loop control

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	2 %
setting time	
• load step 50 to 100% typical	0.25 ms
• load step 100 to 50% typical	0.5 ms
relative control precision of the output voltage at load step of resistive load 10/90/10 % typical	2 %
setting time	
• load step 10 to 90% typical	0.25 ms
• load step 90 to 10% typical	0.5 ms
• maximum	1 ms

### Protection and monitoring

design of the overvoltage protection	< 33 V
• typical	6 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 6 A or latching shutdown
enduring short circuit current RMS value	
• typical	6 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
display version for overload and short circuit	LED yellow for "overload", LED red for "latching shutdown"

### Safety

galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
protection class IP	IP20

### Approvals

certificate of suitability	
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<ul style="list-style-type: none"> <li>• CE marking</li> <li>• UL approval</li> </ul>	Yes
<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>• cCSAus, Class 1, Division 2</li> <li>• ATEX</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)
certificate of suitability	No
<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	No
certificate of suitability	No
<ul style="list-style-type: none"> <li>• EAC approval</li> </ul>	No
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	Yes
Marine classification association	ABS, DNV GL
<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; startup tested starting from -40 °C nominal voltage -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	screw-type terminals
<ul style="list-style-type: none"> <li>• at input</li> <li>• at output</li> <li>• for auxiliary contacts</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 2.5 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	45 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	0.8 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, TI-grey 3RT2900-1SB20
MTBF at 40 °C	1 421 519 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

