



SITOP PSU8200/1ACDC/24VDC/20A

SITOP PSU8200 20 A stabilized power supply input: 120-230 V AC 110-220 V DC output: 24 V DC/20 A \*Ex approval no longer available\*

Input	
type of the power supply network	1-phase and 2-phase AC or DC
supply voltage at AC	
• minimum rated value	120 V
• maximum rated value	230 V
• initial value	85 V; Derating of temperature necessary down to 50 °C at Vin < 100 V AC or DC
• full-scale value	275 V
supply voltage	
• at DC	110 ... 220 V
input voltage	
• at DC	88 ... 350 V
design of input wide range input	Yes
operating condition of the mains buffering	at Vin = 230 V
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at Vin = 230 V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	45 ... 65 Hz
input current	
• at rated input voltage 120 V	4.6 A
• at rated input voltage 230 V	2.5 A
current limitation of inrush current at 25 °C maximum	20 A
I <sup>2</sup> t value maximum	5 A <sup>2</sup> ·s
fuse protection type	Yes
• in the feeder	Recommended miniature circuit breaker at 1-phase operation: 10 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2711-1HD10 (UL 489) at 120 V or 3RV2711-1ED10 (UL 489) at 230 V
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	0.3 %
residual ripple	
• maximum	100 mV

<ul style="list-style-type: none"> <li>• typical</li> </ul>	80 mV
voltage peak	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	200 mV
<ul style="list-style-type: none"> <li>• typical</li> </ul>	100 mV
adjustable output voltage	24 ... 28.8 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
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"> <li>• typical</li> </ul>	50 ms
output current	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	20 A
<ul style="list-style-type: none"> <li>• rated range</li> </ul>	0 ... 20 A; +60 ... +70 °C: Derating 3%/K
supplied active power typical	480 W
short-term overload current	
<ul style="list-style-type: none"> <li>• at short-circuit during operation typical</li> </ul>	60 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> <li>• at short-circuit during operation</li> </ul>	25 ms
constant overload current	
<ul style="list-style-type: none"> <li>• on short-circuiting during the start-up typical</li> </ul>	30 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	93 %
power loss [W]	
<ul style="list-style-type: none"> <li>• at rated output voltage for rated value of the output current typical</li> </ul>	42 W
<b>Closed-loop control</b>	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	0.5 %
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> </ul>	1 ms
<ul style="list-style-type: none"> <li>• load step 100 to 50% typical</li> </ul>	1 ms
setting time	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	5 ms
<b>Protection and monitoring</b>	
design of the overvoltage protection	< 33 V
<ul style="list-style-type: none"> <li>• typical</li> </ul>	21.5 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 23 A or latching shutdown
enduring short circuit current RMS value	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	23 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"
<b>Safety</b>	
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	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	3.5 mA
<ul style="list-style-type: none"> <li>• typical</li> </ul>	1 mA
protection class IP	IP20
<b>Approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• CE marking</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• UL 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>• 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> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX</li> </ul>	No
certificate of suitability	
<ul style="list-style-type: none"> <li>• IECEx</li> </ul>	No
<ul style="list-style-type: none"> <li>• NEC Class 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• ULhazloc approval</li> </ul>	No
<ul style="list-style-type: none"> <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> </ul>	Yes
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• DNV GL</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	No
<b>EMC</b>	
standard	
<ul style="list-style-type: none"> <li>• for emitted interference</li> </ul>	EN 55022 Class B
<ul style="list-style-type: none"> <li>• for mains harmonics limitation</li> </ul>	EN 61000-3-2
<ul style="list-style-type: none"> <li>• for interference immunity</li> </ul>	EN 61000-6-2
<b>environmental conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-25 ... +70 °C; With natural convection; startup tested starting from -40 °C nominal voltage
<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
<b>Mechanics</b>	
type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> <li>• at input</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 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 0.14 ... 1.5 mm <sup>2</sup>
width of the enclosure	90 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	50 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
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, TI-grey 3RT2900-1SB20
MTBF at 40 °C	667 048 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

