



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
• 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 $V_{in} = 230\text{ V}$
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 $V_{in} = 230\text{ V}$
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 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 ² t value maximum	5 A ² ·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"> • typical 	80 mV
voltage peak	
<ul style="list-style-type: none"> • maximum 	200 mV
<ul style="list-style-type: none"> • typical 	100 mV
adjustable output voltage	24 ... 28 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"> • typical 	250 ms
output current	
<ul style="list-style-type: none"> • rated value 	20 A
<ul style="list-style-type: none"> • rated range 	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"> • at short-circuit during operation typical 	60 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> • at short-circuit during operation 	25 ms
constant overload current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up typical 	30 A
product feature	
<ul style="list-style-type: none"> • bridging of equipment 	Yes; switchable characteristic
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	94 %
power loss [W]	
<ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical 	31 W
Closed-loop control	
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"> • load step 50 to 100% typical 	1 ms
<ul style="list-style-type: none"> • load step 100 to 50% typical 	1 ms
setting time	
<ul style="list-style-type: none"> • maximum 	5 ms
Protection and monitoring	
design of the overvoltage protection	< 31.8 V
<ul style="list-style-type: none"> • typical 	21.5 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 21.5 A or latching shutdown
enduring short circuit current RMS value	
<ul style="list-style-type: none"> • typical 	21.5 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
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	1 mA
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> • CE marking 	Yes

<ul style="list-style-type: none"> • UL approval 	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
<ul style="list-style-type: none"> • CSA approval 	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 62368-1, UL 62368-1)
<ul style="list-style-type: none"> • cCSAus, Class 1, Division 2 	No
<ul style="list-style-type: none"> • ATEX 	No
certificate of suitability	
<ul style="list-style-type: none"> • IECEx 	No
<ul style="list-style-type: none"> • NEC Class 2 	No
<ul style="list-style-type: none"> • ULhazloc approval 	No
<ul style="list-style-type: none"> • FM registration 	No
type of certification CB-certificate	Yes
certificate of suitability	
<ul style="list-style-type: none"> • EAC approval 	Yes
<ul style="list-style-type: none"> • Regulatory Compliance Mark (RCM) 	Yes
<ul style="list-style-type: none"> • UKCA marking 	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV
Marine classification association	
<ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) 	Yes
<ul style="list-style-type: none"> • French marine classification society (BV) 	No
<ul style="list-style-type: none"> • DNV GL 	Yes
<ul style="list-style-type: none"> • Lloyds Register of Shipping (LRS) 	No
<ul style="list-style-type: none"> • Nippon Kaiji Kyokai (NK) 	No
EMC	
standard	
<ul style="list-style-type: none"> • for emitted interference 	EN 55022 Class B
<ul style="list-style-type: none"> • for mains harmonics limitation 	EN 61000-3-2
<ul style="list-style-type: none"> • for interference immunity 	EN 61000-6-2
environmental conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +70 °C; With natural convection; startup tested starting from -40 °C nominal voltage
<ul style="list-style-type: none"> • during transport 	-40 ... +85 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> • at input 	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded
<ul style="list-style-type: none"> • at output 	+, -: 2 screw terminals each for 0.2 ... 4 mm ²
<ul style="list-style-type: none"> • for auxiliary contacts 	13, 14 (alarm signal), 15, 16 (Remote ON OFF): 1 screw terminal each for 0.14 ... 1.5 mm ²
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"> • top 	50 mm
<ul style="list-style-type: none"> • bottom 	50 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	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	583 500 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

