

SITOP PSU8200/1AC/24VDC/10A  
SITOP PSU8200 24 V/10 A Stabilized power supply input: 120/230 V  
AC, output: DC 24 V/10 A



Input	
Input	1-phase AC
• Note	Automatic range selection
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	170 ... 264 V
Wide-range input	No
Mains buffering	at Vin = 120/230 V
Mains buffering at lout rated, min.	35 ms; at Vin = 120/230 V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
input current	
• at rated input voltage 120 V	4 A
• at rated input voltage 230 V	1.9 A
Switch-on current limiting (+25 °C), max.	10 A

$I^2t$ , max.	0.3 A <sup>2</sup> ·s
Built-in incoming fuse	T 6.3 A (not accessible)
Protection in the mains power input (IEC 898)	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	
Output	Controlled, isolated DC voltage
Rated voltage $V_{out}$ DC	24 V
Total tolerance, static $\pm$	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.3 %
Residual ripple peak-peak, max.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Adjustment range	24 ... 28.8 V
product function output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 240 W
Status display	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of $V_{out}$ approx. 3 %
Startup delay, max.	1.5 s
Voltage rise, typ.	70 ms
Rated current value $I_{out}$ rated	10 A
Current range	0 ... 10 A
<ul style="list-style-type: none"> <li>Note</li> </ul>	+60 ... +70 °C: Derating 2%/K; as of $U_a > 24$ V: 4% [ $I_a$ ]/V [ $U_a$ ]; at $U_e < 100$ V/<200 V: 80% $I_a$ rated
supplied active power typical	240 W
short-term overload current	
<ul style="list-style-type: none"> <li>at short-circuit during operation typical</li> </ul>	30 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>	12 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	94 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	18 W
power loss [W] during no-load operation maximum	1.5 W

## Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15\%$ ), max.	0.1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	4 %
Load step setting time 50 to 100%, typ.	0.25 ms
Load step setting time 100 to 50%, typ.	0.5 ms
Dynamic load smoothing (Iout: 10/90/10 %), Uout $\pm$ typ.	4 %
Load step setting time 10 to 90%, typ.	0.25 ms
Load step setting time 90 to 10%, typ.	0.5 ms
setting time maximum	1 ms

#### Protection and monitoring

Output overvoltage protection	< 33 V
Current limitation, typ.	12 A
property of the output short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 12 A or latching shutdown
enduring short circuit current RMS value	
• typical	12 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"

#### Safety

Primary/secondary isolation	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
Protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
Degree of protection (EN 60529)	IP20

#### Approvals

CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
Explosion protection	IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3
certificate of suitability NEC Class 2	No
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL

#### EMC

Emitted interference	EN 55022 Class B
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Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

## environmental conditions

ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> <li>— Note</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
Humidity class according to EN 60721	Climate class 3K3, 5 ... 95% no condensation

## Mechanics

Connection technology	screw-type terminals
Connections	
<ul style="list-style-type: none"> <li>Supply input</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup> single-core/finely stranded
<ul style="list-style-type: none"> <li>Output</li> </ul>	+, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>Auxiliary</li> </ul>	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	55 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
Weight, approx.	1 kg
product feature of the enclosure housing can be lined up	Yes
Installation	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	1 292 102 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)