

SITOP PSU8200 24 V/40 A  
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 AC, output: 24 V DC/40 A



Input	
Input	1-phase and 2-phase AC
• Note	Automatic selection; startup starting from $U_e \geq 90/180$ V
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 $V_{in} = 230$ V
Mains buffering at $I_{out}$ rated, min.	25 ms; at $V_{in} = 230$ V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	45 ... 65 Hz
Input current	
• at rated input voltage 120 V	15 A
• at rated input voltage 230 V	9 A
Switch-on current limiting (+25 °C), max.	50 A

I <sup>2</sup> t, max.	8 A <sup>2</sup> ·s
Built-in incoming fuse	Yes
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: 16 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2421-4BA10 (120 V) or 3RV2411-1JA10 (230 V)

## Output

Output	Controlled, isolated DC voltage
Rated voltage V <sub>out</sub> DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.1 %
Residual ripple peak-peak, max.	100 mV
Residual ripple peak-peak, typ.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	220 mV
Adjustment range	24 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 960 W
Status display	Green LED for 24 V OK; LED yellow for overload; LED red for short-circuit or latching shutdown
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of V <sub>out</sub> approx. 3 %
Startup delay, max.	1.5 s
Voltage rise, typ.	30 ms
Rated current value I <sub>out</sub> rated	40 A
Current range	0 ... 40 A
• Note	+60 ... +70 °C: Derating 3%/K
Supplied active power typical	960 W
Short-term overload current	
• on short-circuiting during the start-up typical	120 A
• at short-circuit during operation typical	120 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	25 ms
• at short-circuit during operation	25 ms
Constant overload current	
• on short-circuiting during the start-up typical	60 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

## Efficiency

Efficiency at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	92 %
Power loss at V <sub>out</sub> rated, I <sub>out</sub> rated, approx.	82 W

Power loss [W] during no-load operation maximum	6.8 W
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### Closed-loop control

Dynamic mains compensation (Vin rated $\pm 15\%$ ), max.	1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	1.9 %
Load step setting time 50 to 100%, typ.	2 ms
Load step setting time 100 to 50%, typ.	2 ms
Dynamic load smoothing (Iout: 10/90/10 %), Uout $\pm$ typ.	3.8 %
Load step setting time 10 to 90%, typ.	1 ms
Load step setting time 90 to 10%, typ.	1 ms
Setting time maximum	1 ms

### Protection and monitoring

Output overvoltage protection	< 32 V
Current limitation, typ.	41 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 41 A or latching shutdown
Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	41 A
Overcurrent overload capability in normal operation	250% Iout rated up to 25 ms, 150% Iout rated up to 5 s/min
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown" or "short-circuit"

### 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 <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	0.1 mA 0.1 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 T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3; cULus (Hazloc) Class I, Div. 2, Group ABCD, T3; File E330455
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL

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

environmental conditions	
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul>	-25 ... +70 °C with natural convection -40 ... +85 °C -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> <li>• Output</li> <li>• Auxiliary</li> </ul>	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.5 ... 10 mm <sup>2</sup> 13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>
Width of the enclosure	145 mm
Height of the enclosure	145 mm
Depth of the enclosure	150 mm
Required spacing	
<ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	40 mm 40 mm 0 mm 0 mm
Weight, approx.	3.1 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x15
Electrical accessories	Buffer module, redundancy module
Mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	838 156 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)