

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



Input	
Input	1-phase AC
Supply voltage	
<ul style="list-style-type: none"> <li>• 1 at AC Rated value</li> <li>• 2 at AC Rated value</li> <li>• Note</li> </ul>	120 V 230 V Automatic selection; startup starting from $U_e \geq 90/180$ 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
Wide-range input	No
Mains buffering at I <sub>out</sub> 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	
<ul style="list-style-type: none"> <li>• at rated input voltage 120 V</li> <li>• at rated input voltage 230 V</li> </ul>	15 A 9 A
Switch-on current limiting (+25 °C), max.	60 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 $V_{out}$ DC	24 V
Total tolerance, static $\pm$	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 $V_{out}$ approx. 3 %
Startup delay, max.	1.5 s
Voltage rise, typ.	30 ms
Rated current value $I_{out}$ 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 $V_{out}$ rated, $I_{out}$ rated, approx.	92 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	82 W
Power loss [W] during no-load operation maximum	6.8 W

Closed-loop control	
Dynamic mains compensation ( $V_{in}$ rated $\pm 15\%$ ), max.	1 %
Dynamic load smoothing (I <sub>out</sub> : 50/100/50 %), U <sub>out</sub> $\pm$ 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 (I <sub>out</sub> : 10/90/10 %), U <sub>out</sub> $\pm$ 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% I <sub>out</sub> rated up to 25 ms, 150% I <sub>out</sub> 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 U <sub>out</sub> 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
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
Degree of protection (EN 60529)	IP20

EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	-

Noise immunity	EN 61000-6-2
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### Operating data

Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>— Note</li> <li>• during transport</li> <li>• during storage</li> </ul>	<p>-25 ... +70 °C with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
Humidity class according to EN 60721	Climate class 3K3, 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>	<p>L, N, PE: 1 screw terminal each for 0.2 ... 4 mm<sup>2</sup> single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.5 ... 10 mm<sup>2</sup></p> <p>13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm<sup>2</sup></p>
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>	<p>40 mm</p> <p>40 mm</p> <p>0 mm</p> <p>0 mm</p>
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)