

SITOP PSU8200 24 V/20 A  
 SITOP PSU8200 24 V/20 A Stabilized power supply input: 3 AC 400-500 V output: 24 V DC/20 A



Input	
Input	3-phase AC
Rated voltage value $V_{in}$ rated	400 ... 500 V
Voltage range AC	320 ... 575 V
Wide-range input	Yes
Mains buffering at $I_{out}$ rated, min.	15 ms; at $V_{in} = 400$ 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 400 V	1.2 A
• at rated input voltage 500 V	1 A
Switch-on current limiting (+25 °C), max.	16 A
$I^2t$ , max.	0.8 A <sup>2</sup> ·s
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 6 ... 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)

### 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.	0.2 %
Residual ripple peak-peak, max.	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Adjustment range	24 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 480 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	No overshoot of $V_{out}$ (soft start)
Startup delay, max.	2.5 s
Voltage increase time of the output voltage maximum	500 ms
Rated current value $I_{out\ rated}$	20 A
Current range	0 ... 20 A
<ul style="list-style-type: none"> <li>Note</li> </ul>	+60 ... +70 °C: Derating 2%/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>	22 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.	31 W

### Closed-loop control

Dynamic mains compensation ( $V_{in\ rated} \pm 15\%$ ), max.	0.1 %
Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ typ.	1 %
Load step setting time 50 to 100%, typ.	0.2 ms
Load step setting time 100 to 50%, typ.	0.2 ms
Dynamic load smoothing ( $I_{out}$ : 10/90/10 %), $U_{out} \pm$ typ.	2 %
Load step setting time 10 to 90%, typ.	0.2 ms
Load step setting time 90 to 10%, typ.	0.2 ms
Setting time maximum	10 ms

Protection and monitoring	
Output overvoltage protection	< 32 V
Current limitation, typ.	22 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 22 A or latching shutdown
Enduring short circuit current RMS value <ul style="list-style-type: none"> <li>• typical</li> </ul>	22 A
Overcurrent overload capability in normal operation	overload capability 150 % I <sub>out</sub> 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 V <sub>out</sub> according to EN 60950-1
Protection class	Class I
Leakage current <ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	3.5 mA 0.9 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 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, T4
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	EN 61000-3-2
Noise immunity	EN 61000-6-2

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>	-25 ... +70 °C With natural convection; startup tested starting from -40 °C nominal voltage -40 ... +85 °C -40 ... +85 °C
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>L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm<sup>2</sup> single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.2 ... 4 mm<sup>2</sup></p> <p>13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm<sup>2</sup>;</p> <p>15, 16 (Remote): 1 screw terminal each for 0.14 ... 1.5 mm<sup>2</sup></p>
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	125 mm
Required spacing	
<ul style="list-style-type: none"> <li>• top</li> <li>• bottom</li> <li>• left</li> <li>• right</li> </ul>	<p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>
Weight, approx.	1.2 kg
Product feature of the enclosure housing for side-by-side mounting	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	590 573 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)