

SITOP PSU8200 48 V/20 A  
 SITOP PSU8200 48 V/20 A Stabilized power supplies Input: 3 400-500 V AC Output: 48 V/20 A DC



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 $V_{in} = 400$ V
Mains buffering at $I_{out}$ rated, min.	10 ms; at $V_{in} = 400$ 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 400 V	2 A
• at rated input voltage 500 V	1.7 A
Switch-on current limiting (+25 °C), max.	13 A
$I^2t$ , max.	2.24 A <sup>2</sup> ·s
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 10 ... 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	48 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)	480 mV
Adjustment range	46 ... 56 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 960 W
Status display	Green LED for 48 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for 48 V OK
On/off behavior	minimal overshoot (< 3 %)
Startup delay, max.	0.1 s
Voltage increase time of the output voltage maximum	100 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 4%/K
Supplied active power typical	960 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>	24 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.	58 W
Power loss [W] during no-load operation maximum	4 W

### Closed-loop control

Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.	1 %
Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out} \pm$ typ.	3 %
Setting time maximum	10 ms

### Protection and monitoring

Output overvoltage protection	< 57.8 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>	26 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 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>	1 mA 0.6 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, T4
FM approval	-
CB approval	Yes
Marine approval	-

### EMC

Emitted interference	EN 55022 Class B
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 <ul style="list-style-type: none"> <li>— Note</li> </ul> </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> </ul>	L1, L2, L3, PE: 1 screw terminal each for 0.5 ... 4 mm <sup>2</sup> single-core/finely stranded

<ul style="list-style-type: none"> <li>• Output</li> </ul>	+ : 2 screw terminals each for 0.5 ... 16 mm <sup>2</sup> ; - : 3 screw terminals each for 0.5 ... 16 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• Auxiliary</li> </ul>	13, 14 (alarm signal), 15, 16 (Remote): 1 screw terminal each for 0.05 ... 2.5 mm <sup>2</sup>
Width of the enclosure	135 mm
Height of the enclosure	145 mm
Depth of the enclosure	150 mm
Required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	40 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	40 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.	3.3 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x15
Mechanical accessories	Device identification label 20 mm × 7 mm, TI-grey 3RT2900-1SB20
MTBF at 40 °C	520 782 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)