

SITOP PSU8200 24 V/40 A
SITOP PSU8200 24 V/40 A STABILIZED POWER SUPPLY INPUT:
120/230 V AC OUTPUT: 24 V/40 A DC



Input	
Input	1-phase AC
Supply voltage	
• 1 at AC Rated value	120 V
• 2 at AC Rated value	230 V
• Note	automatic selection; starting from $V_{in} \geq 90/180$ V
Input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	170 ... 264 V
Wide-range input	No
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.	60 A
I ² t, max.	8 A ² ·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 Vout 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 Vout approx. 3 %
Startup delay, max.	1.5 s
Voltage rise, typ.	30 ms
Rated current value Iout 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 Vout rated, Iout rated, approx.	92 %
Power loss at Vout rated, Iout 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_{out} : 50/100/50 %), $U_{out} \pm$ 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_{out} : 10/90/10 %), $U_{out} \pm$ 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 • typical	41 A
Overcurrent overload capability in normal operation	250% I_{out} rated up to 25 ms, 150% I_{out} 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_{out} acc. to EN 60950-1 and EN 50178
Protection class	Class I
Leakage current • maximum • typical	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	GL; ABS in process
Degree of protection (EN 60529)	IP20

EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	-

Noise immunity	EN 61000-6-2
Operating data	
Ambient temperature	
during operation	0 ... 70 °C
- Note	with natural convection
during transport	-40 ... +85 °C
during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, no condensation
Mechanics	
Connection technology	screw-type terminals
Connections	
Supply input	L, N, PE: 1 screw terminal each for 0.2 ... 4 mm ² single-core/finely stranded
Output	+, -: 2 screw terminals each for 0.5 ... 10 mm ²
Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm ²
Width of the enclosure	145 mm
Height of the enclosure	145 mm
Depth of the enclosure	150 mm
Required spacing	
top	40 mm
bottom	40 mm
left	0 mm
right	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, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	838 156 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)