



SITOP PSU300B 24 V/17 A  
 SITOP PSU300B 24V/17A STABILIZED POWER SUPPLY INPUT:  
 400-500 V 3 AC OUTPUT: 24 V/17 A DC OPTIMIZED FOR  
 BATTERY CHARGING

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.	20 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.	18 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 ... 28.8 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	17 A
Current range	0 ... 17 A
• Note	+60 ... +70 °C: Derating 2%/K
Supplied active power typical	408 W
Constant overload current	
• on short-circuiting during the start-up typical	19 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.	93 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	31 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.	2 %
Load step setting time 50 to 100%, typ.	2 ms
Load step setting time 100 to 50%, typ.	2 ms
Setting time maximum	10 ms

#### Protection and monitoring

Output overvoltage protection	< 35 V
Current limitation, typ.	19 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 19 A or latching shutdown
Enduring short circuit current RMS value	
• typical	19 A

Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"
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### 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	
• maximum	3.5 mA
• typical	0.9 mA
CE mark	Yes
UL/cUL (CSA) approval	in preparation
Explosion protection	in preparation
FM approval	-
CB approval	No
Marine approval	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	
• during operation	-25 ... +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	L1, L2, L3, PE: 1 screw terminal each for 0.2 ... 4 mm <sup>2</sup> single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.2 ... 4 mm <sup>2</sup>
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm <sup>2</sup>
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	125 mm
Required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm

• right	0 mm
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, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	664 995 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)