

SITOP PSU300S 24 V/10 A
 SITOP PSU300S 24 V/10 A stabilized power supply input: 400-500 V
 3AC output: 24 V DC/10 A



Input	
Input	3-phase AC
Rated voltage value V_{in} rated	400 ... 500 V
Voltage range AC	340 ... 550 V
Wide-range input	Yes
Mains buffering at I_{out} rated, min.	6 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	0.7 A
• at rated input voltage 500 V	0.6 A
Switch-on current limiting (+25 °C), max.	20 A
I^2t , max.	0.5 A ² ·s
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 3 ... 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.	0.15 %
Residual ripple peak-peak, max.	200 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Adjustment range	24 ... 28 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer; max. 240 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	Overshoot of $V_{out} < 5$ %
Startup delay, max.	1.5 s
Voltage rise, typ.	50 ms
Voltage increase time of the output voltage maximum	500 ms
Rated current value I_{out} rated	10 A
Current range	0 ... 10 A
• Note	12 A up to +45 °C
Supplied active power typical	240 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency

Efficiency at V_{out} rated, I_{out} rated, approx.	91 %
Power loss at V_{out} rated, I_{out} rated, approx.	23 W

Closed-loop control

Dynamic mains compensation (V_{in} rated ± 15 %), max.	1 %
Dynamic load smoothing (I_{out} : 50/100/50 %), $U_{out} \pm$ typ.	1 %
Load step setting time 50 to 100%, typ.	3 ms
Load step setting time 100 to 50%, typ.	3 ms
Dynamic load smoothing (I_{out} : 10/90/10 %), $U_{out} \pm$ typ.	3 %
Load step setting time 10 to 90%, typ.	4 ms
Load step setting time 90 to 10%, typ.	4 ms
Setting time maximum	10 ms

Protection and monitoring

Output overvoltage protection	protection against overvoltage in case of internal fault $V_{out} < 35$ V
Current limitation, typ.	13 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Constant current characteristic

Enduring short circuit current RMS value	
• maximum	16 A
Overcurrent overload capability in normal operation	overload capability 150 % I _{out} rated up to 5 s/min

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
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	GL and ABS in process
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 0.05 ... 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm ²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.7 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	1 458 540 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)