

SITOP PSU300S 24 V/5 A
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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 $V_{in} = 400$ V
Mains buffering at I_{out} rated, min.	18 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	0.45 A
• at rated input voltage 500 V	0.4 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-listed, DIVQ)

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.	0.1 %
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. 120 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.	60 ms
Voltage increase time of the output voltage maximum	500 ms
Rated current value I_{out} rated	5 A
Current range	0 ... 5 A
• Note	6 A up to +45°C; +60 ... +70 °C: Derating 5%/K
Supplied active power typical	120 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.	89.5 %
Power loss at V_{out} rated, I_{out} rated, approx.	14 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.	6.6 A
Property of the output Short-circuit proof	Yes

Short-circuit protection	Constant current characteristic
Enduring short circuit current RMS value <ul style="list-style-type: none"> • maximum 	8 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, transformer acc. to EN 61558-2-16
Protection class	Class I
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; cULus Class I Div. 2 (ANSI/ISA-12.12.01-2007, CSA C22.2 No. 213-M1987) Group ABCD, T4
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL

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"> • during operation — Note • during transport • during storage 	-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"> • Supply input • Output • Auxiliary 	L1, L2, L3, PE: 1 screw terminal each for 0.05 ... 2.5 mm ² single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 2.5 mm ² 13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm ²
Width of the enclosure	50 mm
Height of the enclosure	125 mm
Depth of the enclosure	120 mm
Weight, approx.	0.5 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	Redundancy module, buffer module, selectivity module, DC UPS
Mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	500 000 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)