

SITOP PSU300S 24 V/10 A  
 SITOP PSU300S 24 V/10 A Stabilized power supply input: 3 AC 400-500 V output: DC 24 V/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 $V_{in} = 400$ V
Mains buffering at $I_{out}$ rated, min.	7 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 <sup>2</sup> ·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 Vout DC	24 V
Total tolerance, static ±	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 Vout < 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 Iout rated	10 A
Current range	0 ... 10 A
• Note	12 A up to +45°C; +60 ... +70 °C: Derating 5%/K
Supplied active power typical	240 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at Vout rated, Iout rated, approx.	91 %
Power loss at Vout rated, Iout rated, approx.	23 W

Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout ± 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 (Iout: 10/90/10 %), Uout ± 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 Vout < 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 <ul style="list-style-type: none"> <li>• maximum</li> </ul>	16 A
Overcurrent overload capability in normal operation	overload capability 150 % I <sub>out</sub> rated up to 5 s/min

### Safety

Primary/secondary isolation	Yes
Galvanic isolation	Safety extra-low output voltage U <sub>out</sub> 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"> <li>• during operation</li> <li>— Note</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> <li>• Output</li> <li>• Auxiliary</li> </ul>	L1, L2, L3, PE: 1 screw terminal each for 0.05 ... 2.5 mm <sup>2</sup> single-core/finely stranded +, -: 2 screw terminals each for 0.2 ... 2.5 mm <sup>2</sup> 13, 14 (alarm signal): 1 screw terminal each for 0.2 ... 2.5 mm <sup>2</sup>
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	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)