

SITOP PSU300E 24 V/5 A
SITOP PSU300E 24 V/5 A STABILIZED POWER SUPPLY INPUT: 3
400-500 V AC OUTPUT: 24 V/5 A DC



Input	
Input	3-phase AC
Rated voltage value Vin rated	400 ... 500 V
Voltage range AC	320 ... 550 V
Wide-range input	Yes
Mains buffering at Iout rated, min.	50 ms; at Vin = 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	0.36 A
• at rated input voltage 500 V	0.29 A
Switch-on current limiting (+25 °C), max.	15 A
I²t, max.	0.9 A²·s
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 6 A characteristic B or C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489)

Output

Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static $\pm$	3 %
Static mains compensation, approx.	3 %
Static load balancing, approx.	3 %
Residual ripple peak-peak, max.	150 mV
Residual ripple peak-peak, typ.	35 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	240 mV
Spikes peak-peak, typ. (bandwidth: 20 MHz)	70 mV
Adjustment range	24 ... 29 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 Vout approx. 3 %
Startup delay, max.	0.5 s
Voltage rise, typ.	10 ms
Voltage increase time of the output voltage maximum	100 ms
Rated current value Iout rated	5 A
Current range	0 ... 5 A
Supplied active power typical	120 W
Short-term overload current	
• on short-circuiting during the start-up typical	33 A
• at short-circuit during operation typical	28 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	140 ms
• at short-circuit during operation	135 ms
Parallel switching for enhanced performance	No

Efficiency

Efficiency at Vout rated, Iout rated, approx.	90 %
Power loss at Vout rated, Iout rated, approx.	13 W

Closed-loop control

Dynamic mains compensation (Vin rated ± 15 %), max.	3 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout $\pm$ typ.	5 %
Load step setting time 50 to 100%, typ.	1 ms
Load step setting time 100 to 50%, typ.	1 ms
Dynamic load smoothing (Iout: 10/90/10 %), Uout $\pm$ typ.	1 %
Load step setting time 10 to 90%, typ.	1 ms
Load step setting time 90 to 10%, typ.	1 ms
Setting time maximum	30 ms

Protection and monitoring	
Output overvoltage protection	Yes, according to EN 60950-1
Current limitation, typ.	11 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current RMS value	
• maximum	7.5 A

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
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-
FM approval	-
CB approval	Yes
Marine approval	-
Degree of protection (EN 60529)	IP20

EMC	
Emitted interference	EN 55022 Class A
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

Operating data	
Ambient temperature	
• during operation	0 ... 60 °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: Removable screw terminal for 0.5 ... 2.5 mm ² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm ²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.5 ... 2.5 mm ²
Product function	
• removable terminal at input	Yes
• removable terminal at output	Yes
Width of the enclosure	42 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.	0.6 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
MTBF at 40 °C	2 389 441 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)