



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

Technical specifications

Product	SITOP PSU300E
Power supply, type	24 V/5 A

Input

Input	3-phase AC
Rated voltage value V_{in} rated	400 ... 500 V
Voltage range AC	320 ... 550 V
Wide-range input	Yes
Mains buffering at I_{out} rated, min.	50 ms; at $V_{in} = 400$ V
Rated line frequency	50 ... 60 Hz
Rated line range	47 ... 63 Hz
Input current at rated input voltage 400 V Rated value	0.36 A
Input current at rated input voltage 500 V Rated value	0.29 A
Switch-on current limiting (+25 °C), max.	15 A
I^2t , max.	0.9 A ² ·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 V_{out} 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
Active power supplied typical	120 W
Short-term overload current on short-circuiting during the start-up typical	33 A
Duration of overloading capability for excess current on short-circuiting during the start-up	140 ms
Short-term overload current at short-circuit during operation typical	28 A
Duration of overloading capability for excess current 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 U _{out} acc. to EN 60950-1 and EN 50178
Protection class	Class I
CE mark	Yes
UL/CSA approval	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
Explosion protection	-
Certificate of suitability IECEx	No
Certificate of suitability NEC Class 2	No
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
Ambient temperature during transport	-40 ... +85 °C
Ambient temperature 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
Connections Output	+, -: 2 screw terminals each for 0.5 ... 2.5 mm ²
Connections Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.5 ... 2.5 mm ²
Product function removable terminal at input	Yes
Product function removable terminal at output	Yes
Width of the enclosure	42 mm
Height of the enclosure	125 mm
Depth of the enclosure	125 mm
Weight, approx.	0.6 kg

Product property of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)