SIEMENS

Data sheet 6EP1437-2BA20

SITOP PSU300S 24 V/40 A
SITOP PSU300S 40A Stabilized power supply input: 3 AC 400-500 V output: 24 V DC/40 A

Input	
Input	3-phase AC
Rated voltage value Vin rated	400 ... 500 V
Voltage range AC	340 ... 550 V
Wide-range input	Yes
Mains buffering at Iout rated, min.	6 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	2 A
• at rated input voltage 500 V	1.7 A
Switch-on current limiting (+25 °C), max.	60 A
I^2t, max.	3.4 $A^2 \cdot s$
Built-in incoming fuse	none
Protection in the mains power input (IEC 898)	Required: 3-pole connected miniature circuit breaker 10 ... 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 Vout DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	1 %
Static load balancing, approx.	2 %
Residual ripple peak-peak, max.	150 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. 960 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	No overshoot of Vout (soft start)
Startup delay, max.	1.5 s
Voltage rise, typ.	15 ms
Voltage increase time of the output voltage maximum	500 ms
Rated current value Iout rated	40 A
Current range	0 ... 40 A
• Note	48 A up to +45°C; +60 ... +70 °C: Derating 2.5%/K
Supplied active power typical	960 W
Short-term overload current	
• on short-circuiting during the start-up typical	65 A
• at short-circuit during operation typical	65 A
Duration of overloading capability for excess current	
• on short-circuiting during the start-up	120 ms
• at short-circuit during operation	120 ms
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at Vout rated, Iout rated, approx.	91.5 %
Power loss at Vout rated, Iout rated, approx.	89 W

Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	3 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.	1.5 %
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 ± typ.	3 %
Load step setting time 10 to 90%, typ.	1 ms
Load step setting time 90 to 10%, typ.	1 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.	50 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current RMS value	
• maximum	14 A
Overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
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; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
Explosion protection	IECEx Ex nA nC IIC T3 Gc; ATEX (EX) II 3G Ex nA nC IIC T3 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL
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	0 ... 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 0.2 ... 4 mm² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.5 ... 10 mm²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm²

Width of the enclosure	150 mm
Height of the enclosure	145 mm
Depth of the enclosure	150 mm
Required spacing	
• top	40 mm
• bottom	40 mm
• left	0 mm
• right	0 mm
Weight, approx.	3.7 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x15
Electrical accessories	Buffer module
Mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	718 292 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)