SIEMENS

Data sheet 6EP1436-2BA10



SITOP PSU300S/3AC/24VDC/20A

SITOP PSU300S 20 A stabilized power supply input: 400-500 V 3 AC output: 24 V DC/20 A *Ex approval no longer available*

type of the power supply network supply voltage at AC eminimum rated value maximum rated value initial value initial value initial value soft Wascale value design of input wide range input operating condition of the mains buffering the vent of power failure minimum operating condition of the mains buffering at Vin = 400 V buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering inne frequency 1 rated value 2 rated value inne frequency 4 r 63 Hz input current at rated input voltage 400 V at rated input voltage 400 V at rated input voltage 500 V 1 A current limitation of inrush current at 25 °C maximum 12 value maximum 0 .9 A²s none Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-lised, DIVQ) Output voltage curve at output output voltage at output 1 at DC rated value at output 1 at DC rated value at output voltage an on slow fluctuation of horu toltage an on slow fluctuation of horu toltage an on slow fluctuation of horu voltage and slotable output voltage and voltage peak and voltage reak and voltage adjustable Yes	Input	
minimum rated value maximum rated value maximum rated value initial value input wide range input yes operating condition of the mains buffering uniform value of the output current in the event of power failure minimum operating condition of the mains buffering initial value initial value value initia	type of the power supply network	3-phase AC
maximum rated value initial value intitial value full-scale value full-scale value full-scale value design of input wide range input yes operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V maximum rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V iline frequency	supply voltage at AC	
initial value full-scale value for full-scale value for full-scale value design of input wide range input operating condition of the mains buffering at Vin = 400 V buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V iline frequency 1 rated value 2 rated value 1 rated value 2 rated value 3 to Hz iline frequency 1 rated value 2 rated input voltage 400 V 1 2 A 3 at rated input voltage 500 V 1 A current limitation of inrush current at 25 °C maximum 20 ya s 12t value maximum 10.9 As s 12t value maximum 10.9 As s 10se protection type 1 in the feeder 1 controlled, isolated DC voltage 1 output voltage at DC rated value 2 at V 1 output voltage 1 at output 1 at DC rated value 2 at V 1 at output 1 at DC rated value 1 consolid loterance of the voltage 1 on slow fluctuation of input voltage 1 on slow fluctuation of input voltage 1 on slow fluctuation of hipot voltage 1 on slow fluctuation of hipot voltage 1 maximum 1 to mill imple 1 maximum 2 du mv voltage peak 1 maximum 2 du mv adjustable output voltage 2 du mv	 minimum rated value 	400 V
design of input wide range input yes operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V inine frequency • 1 rated value • 2 rated value • 2 rated value • 30 Hz inine frequency • 1 rated input voltage 400 V • 1 rated input voltage 400 V • 1 rated input voltage 500 V 1 A current limitation of inrush current at 25 °C maximum 38 A 12t value maximum 0.9 A²-s none Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output coutput voltage • at output 1 at DC rated value • at output 1 at DC rated value • at output 1 at DC rated value • at output 1 of precision of the output voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum 240 mV adjustable output voltage 24 v 28 V	 maximum rated value 	500 V
design of linput wide range input operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value • 2 rated value • 30 Hz input current • at rated input voltage 400 V • at rated input voltage 400 V • at rated input voltage 500 V current limitation of inrush current at 25 °C maximum 12t value maximum 0.9 A²s fuse protection type • in the feeder • in the feeder • in the feeder output voltage at DC rated value output voltage at DC rated value • at output 1 at DC rated value • at output 1 at DC rated value • at output 1 at DC rated value • on slow fluctuation of input voltage • on slow fluctuation of pinput voltage • on slow fluctuation of pinput voltage • naximum 150 mV voltage peak • maximum voltage peak • maximum 240 mV adjustable output voltage 424 28 V	• initial value	340 V
operating condition of the mains buffering buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering at Vin = 400 V line frequency • 1 rated value • 2 rated value • 2 rated value • 30 Hz line frequency • 1 rated value • 30 Hz line frequency • 1 rated value • 2 rated value • 30 Hz line frequency • 1 rated input voltage 400 V • at rated input voltage 500 V • in the feeder • in the feeder • in the feeder • in the feeder voltage curve at output voltage curve at output voltage curve at output cutput voltage at DC rated value • at output 1 at DC rated value • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum 240 mV adjustable output voltage 24 28 V	• full-scale value	550 V
buffering time for rated value of the output current in the event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value • 30 Hz • 60 Hz line frequency • 1 rated input voltage 400 V • at rated input voltage 500 V current limitation of inrush current at 25 °C maximum 0.9 A²-s fuse protection type • in the feeder • in the feeder • an in the feeder • an interval of the voltage at DC rated value output voltage at DC rated value output voltage • at output 1 at DC rated value • an slow fluctuation of input voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum adjustable output voltage • maximum 240 mV adjustable output voltage • maximum 240 mV adjustable output voltage • maximum 240 mV adjustable output voltage • maximum 240 mV adjustable output voltage	design of input wide range input	Yes
event of power failure minimum operating condition of the mains buffering line frequency • 1 rated value • 2 rated value • 2 rated value input current • at rated input voltage 400 V • 1 at rated input voltage 500 V • 1 at rated input voltage 500 V • 1 at rated input voltage 500 V • at rated input voltage 500 V • in the feeder voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value output voltage • at output 1 at DC rated value • at output 1 at DC rated value • on slow fluctuation of input voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum adjustable output voltage 24 28 V	operating condition of the mains buffering	at Vin = 400 V
line frequency • 1 rated value • 2 rated value 1 so Hz 60 Hz 60 Hz line frequency • at rated input voltage 400 V • at rated input voltage 500 V 1.2 A • at rated input voltage 500 V 1.3 A current limitation of inrush current at 25 °C maximum 12t value maximum 10.9 A²·s fuse protection type • in the feeder • in the feeder voltage curve at output voltage curve at output voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum voltage peak • maximum adjustable output voltage 24 U mV		6 ms
• 1 rated value • 2 rated value 1 ine frequency input current • at rated input voltage 400 V • at rated input voltage 500 V current limitation of inrush current at 25 °C maximum 12 t value maximum o in the feeder in the feeder older at value voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage on on slow fluctuation of ohn loading residual ripple on maximum 150 mV voltage peak • maximum 420 mV adjustable output voltage 24 28 V	operating condition of the mains buffering	at Vin = 400 V
Solid Picture Solid Pictur	line frequency	
line frequency input current • at rated input voltage 400 V • at rated input voltage 500 V current limitation of inrush current at 25 °C maximum 12t value maximum 0.9 A²·s fuse protection type • in the feeder • in the feeder voltage curve at output voltage curve at output output voltage at DC rated value • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum adjustable output voltage 24 28 V	1 rated value	50 Hz
input current at rated input voltage 400 V at rated input voltage 500 V 1.2 A 1.2 A 1.3 A 2.5 C maximum 1.2 value maximum 1.2 value maximum 1.2 value maximum 1.2 value maximum 1.3 6 A 2.5 S 2.6 C maximum 1.8 Required: 3-pole connected miniature circuit breaker 6 16 A 2.7 characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) 2.6 Voltage curve at output 2.7 voltage curve at output 2.7 voltage at DC rated value 2.8 voltage 2.9 at output 1 at DC rated value 2.9 at output 1 at DC rated value 2.9 voltage 2.9 at output 1 at DC rated value 2.9 on slow fluctuation of input voltage 2.9 on slow fluctuation of input voltage 3.7 on slow fluctuation of ohm loading 1.8 residual ripple 2.9 maximum 1.50 mV voltage peak 2.0 maximum 2.40 mV adjustable output voltage 2.4 28 V	2 rated value	60 Hz
at rated input voltage 400 V at rated input voltage 500 V 1 A current limitation of inrush current at 25 °C maximum 36 A 12t value maximum 0.9 A²-s fuse protection type in the feeder Province of in the feeder Controlled, isolated DC voltage output voltage at DC rated value output voltage at a output 1 at DC rated value relative overall tolerance of the voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading residual ripple maximum 150 mV voltage peak maximum 240 mV adjustable output voltage 24 28 V	line frequency	47 63 Hz
● at rated input voltage 500 V current limitation of inrush current at 25 °C maximum 12t value maximum 0.9 A²-s fuse protection type in the feeder Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output output voltage at DC rated value output voltage at output 1 at DC rated value relative overall tolerance of the voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading residual ripple maximum voltage peak maximum adjustable output voltage 24 28 V	input current	
current limitation of inrush current at 25 °C maximum 12t value maximum 0.9 A²·s none Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum adjustable output voltage 24 28 V	 at rated input voltage 400 V 	1.2 Å
I2t value maximum fuse protection type • in the feeder Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum adjustable output voltage 24 28 V		1 A
fuse protection type • in the feeder Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output voltage at DC rated value • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum 150 mV voltage peak • maximum adjustable output voltage 24 28 V	current limitation of inrush current at 25 °C maximum	36 A
Required: 3-pole connected miniature circuit breaker 6 16 A characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Output voltage curve at output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum 150 mV voltage peak • maximum adjustable output voltage 24 28 V	I2t value maximum	0.9 A²·s
characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489-listed, DIVQ) Voltage curve at output	fuse protection type	none
voltage curve at output output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum adjustable output voltage Controlled, isolated DC voltage 24 V Controlled, isolated DC voltage 24 V 25 V 16 V 17 V 18 V 24 V 18 V 24 V 18 V 24 V 24 V 25 V 26 V 26 V 27 V 28 V	• in the feeder	characteristic C or circuit breaker 3RV2011-1DA10 (setting 3 A) or
output voltage at DC rated value output voltage • at output 1 at DC rated value relative overall tolerance of the voltage relative control precision of the output voltage • on slow fluctuation of input voltage • on slow fluctuation of ohm loading residual ripple • maximum voltage peak • maximum 240 mV adjustable output voltage	Output	
output voltage • at output 1 at DC rated value	voltage curve at output	Controlled, isolated DC voltage
 ● at output 1 at DC rated value relative overall tolerance of the voltage 3 % relative control precision of the output voltage ● on slow fluctuation of input voltage ● on slow fluctuation of ohm loading 1 % residual ripple ● maximum voltage peak ● maximum 240 mV adjustable output voltage 24 28 V 	output voltage at DC rated value	24 V
relative overall tolerance of the voltage relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 1 % residual ripple maximum 150 mV voltage peak maximum 240 mV adjustable output voltage 24 28 V	output voltage	
relative overall tolerance of the voltage relative control precision of the output voltage on slow fluctuation of input voltage on slow fluctuation of ohm loading 1 % residual ripple maximum 150 mV voltage peak maximum 240 mV adjustable output voltage 24 28 V	• at output 1 at DC rated value	24 V
 on slow fluctuation of input voltage on slow fluctuation of ohm loading residual ripple maximum voltage peak maximum adjustable output voltage 0.5 % 1 % 		3 %
on slow fluctuation of ohm loading residual ripple	relative control precision of the output voltage	
residual ripple • maximum 150 mV voltage peak • maximum 240 mV adjustable output voltage 24 28 V	on slow fluctuation of input voltage	0.5 %
● maximum 150 mV voltage peak 240 mV adjustable output voltage 24 28 V	on slow fluctuation of ohm loading	1 %
voltage peak	residual ripple	
● maximum 240 mV adjustable output voltage 24 28 V	• maximum	150 mV
adjustable output voltage 24 28 V	voltage peak	
	• maximum	240 mV
product function output voltage adjustable Yes	adjustable output voltage	24 28 V
	product function output voltage adjustable	Yes

tung of output voltage setting	via notantiameter; may 490 M/
type of output voltage setting	via potentiometer; max. 480 W
display version for normal operation	Green LED for 24 V OK
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	1.5 s
voltage increase time of the output voltage	
• typical	30 ms
• maximum	500 ms
output current	
rated value	20 A
rated range	0 20 A
supplied active power typical	480 W
short-term overload current	
 on short-circuiting during the start-up typical 	35 A
 at short-circuit during operation typical 	35 A
duration of overloading capability for excess current	
 on short-circuiting during the start-up 	100 ms
at short-circuit during operation	100 ms
product feature	
bridging of equipment	Yes
number of parallel-switched equipment resources for	2
increasing the power	-
Efficiency	
efficiency in percent	91 %
power loss [W]	· · · ·
at rated output voltage for rated value of the output	47 W
current typical	71 11
Closed-loop control	
relative control precision of the output voltage with rapid	3 %
fluctuation of the input voltage by +/- 15% typical	7 /0
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	3 %
setting time	
 load step 50 to 100% typical 	2 ms
● load step 100 to 50% typical	2 ms
relative control precision of the output voltage at load step	3 %
of resistive load 10/90/10 % typical	
setting time	
● load step 10 to 90% typical	2 ms
● load step 90 to 10% typical	2 ms
• maximum	10 ms
Protection and monitoring	
	protection against overvoltage in case of internal fault Vout < 35 V
design of the overvoltage protection	25.5 A
response value current limitation typical	
property of the output short-circuit proof	Yes
design of short-circuit protection	Electronic shutdown, automatic restart
enduring short circuit current RMS value	
• maximum	7 A
overcurrent overload capability in normal operation	overload capability 150 % lout rated up to 5 s/min
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16
operating resource protection class	Class I
leakage current	
• maximum	3.5 mA
• typical	1 mA
protection class IP	IP20
Approvals	
certificate of suitability	
CE marking	Yes
	100

UL approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
CSA approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
• cCSAus, Class 1, Division 2	No
• ATEX	No
certificate of suitability	
• IECEx	No
NEC Class 2	No
ULhazloc approval	No
FM registration	No
type of certification CB-certificate	Yes
certificate of suitability	
EAC approval	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	ABS, DNV GL
Marine classification association	
 American Bureau of Shipping Europe Ltd. (ABS) 	Yes
French marine classification society (BV)	No
• DNV GL	Yes
Lloyds Register of Shipping (LRS)	No
Nippon Kaiji Kyokai (NK)	No
EMC	INO
standard	EN 55000 Ol D
• for emitted interference	EN 55022 Class B
for mains harmonics limitation	EN 61000-3-2
for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
during operation	-25 +60 °C; with natural convection
during transport	-40 +85 °C
during storage	-40 +85 °C
environmental category acc. to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
• at input	L1, L2, L3, PE: 1 screw terminal each for 0.5 4 mm² single-core/finely stranded
at output	+, -: 2 screw terminals each for 0.2 4 mm ²
for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.05 2.5 mm ²
width of the enclosure	90 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
net weight	1.6 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	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)

