## **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\*

Input	
type of the power supply network	3-phase AC
supply voltage at AC	
minimum rated value	400 V
<ul> <li>maximum rated value</li> </ul>	500 V
• initial value	340 V
• full-scale value	550 V
design of input wide range input	Yes
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	6 ms
operating condition of the mains buffering	at Vin = 400 V
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 63 Hz
input current	
<ul> <li>at rated input voltage 400 V</li> </ul>	1.2 A
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	none
• 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	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
<ul> <li>at output 1 at DC rated value</li> </ul>	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
<ul> <li>on slow fluctuation of input voltage</li> </ul>	0.5 %
<ul> <li>on slow fluctuation of ohm loading</li> </ul>	1 %
residual ripple	
• maximum	150 mV
voltage peak	
maximum	240 mV
adjustable output voltage	24 28 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 480 W

deplay evalue for normal operation per of signal at output behavior of the output voltage when switching on some signal provides the evalue of the output voltage shopping organized the evalue of the output voltage shopping active power typical short-cruit during peraterin product feature short-cruit during peraterin short-cruit during short-cruit cruit cruit voltage with rapid short-cruit during short-cruit cruit cruit voltage with rapid short-cruit during short-cruit cruit cruit cruit cruit short-cruit cruit c		
Interest of the output voltage when switching on   1.5 s   1	display version for normal operation	Green LED for 24 V OK
response delay maximum votage increase time of the output votage • typical • typical • navimum votage increase time of the output votage • nation and sep 100 to 50% spical • nation sep 50 to 10% spical • nation and sep 100 to 50% spical • nation and votage • nation	type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
voltage increase time of the output voltage  * typical  * spical  * spical  * possible device  * cated value  * cated value  * cated value  * cated value  * cated range  * on anoth-cruding during the start-up typical  * on short-foculing during the start-up  * of short-foculing during the start-up  * on short-foculing and short-foculing the sho	behavior of the output voltage when switching on	No overshoot of Vout (soft start)
* spical     * sparamum     * control current     * lated value     * created range     * created current	response delay maximum	1.5 s
* maximum     Output current     * rated value     * rated value power typical     * at short-dirouting during the start-up typical     * at short-dirouting during generation typical     * rated value during operation typical     * rated value during operation     * rated value of the output value of the out	voltage increase time of the output voltage	
output current  • rated value • rated value • rated range 0	• typical	30 ms
Interest value Interest range Inter	• maximum	500 ms
e-rated range	output current	
supplied active power typical short-term overload current on short-circulting during the start-up typical at short-circulting uring operation typical on short-circulting uring operation typical on short-circulting uring operation (on the start-up) on short-circulting uring operation on short-circulting uring operation on short-circulting uring operation on short-circulting uring operation on the start-up on short-circulting operation on the start-up on the s	rated value	20 A
short-term overload current  • on short-circuiting during the start-up hylical • at short-circuit during operation hylical • at short-circuit during operation by case so current • on short-circuiting during the start-up • at short-circuit during operation  product feature • bridging of equipment • bridging of equipment resources for increasing the power  Efficiency  • In related output voltage for rated value of the output • at rated output voltage for rated value of the output • at rated output voltage for rated value of the output • current hybrical  Closs-disops control  • Closs-disops control  • relative control precision of the output voltage with rapid fluctuation of the input voltage by +1-15% typical  • cleate step 50 to 100% typical  • load step 10 to 50% typical  • load step 10 to 50% typical • load step 50 to 100% typical • load step 50 to 100% typical • load step 10 to 50% typical • load step 50 to 100% typical • load step 50 to 100% typical • load step 10 to 50% typical • load step 50 to 100% typical • load step 50 to 100% typical • load step 50 to 100% typical • load step 50 to 50% typ	rated range	0 20 A
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at a hort-circuit during operation typical duration of overloading capability for excess current on short-circuiting during the start-up at a short-circuit during peration product feature bridging of equipment bridging of equipment resources for increasing peration product feature  bridging of equipment resources for increasing peration product feature  bridging of equipment resources for increasing peration product feature  bridging of equipment resources for increasing peration power loss [W] at rated output voltage for rated value of the output current typical  Closed-long control  relative control precision of the output voltage with rapid fluctuation of the input voltage by 4- 15% typical relative control precision of the output voltage load step of resistive load 50100:00% typical  load step 50 to 100% typical  load step 50 to 100% typical  load step 10 to 50% typical  relative control precision of the output voltage at load step of resistive load 15010:00% typical  load step 10 to 90% typical  load step 90 to 10% typical  relative control precision of the output voltage at load step of resistive load 15010:00% typical  load step 90 to 10% typical  load step 90 to 10% typical  relative control precision of the output voltage at load step of resistive load 15010:00% typical  load step 90 to 10%	short-term overload current	
duration of overloading capability for excess current  on short-circulting during the start-up  at short-circult during operation product feature  bridging of equipment  ves indiging of equipment  product feature  bridging of equipment resources for increasing the power  Efficiency  efficiency in percent  power loss IVI  at rated output votage for rated value of the output  current typeral  Closest-Boop control  relative control precision of the output votage with rapid fucution of the input votage by 4r- 19% bycal  relative control precision of the output votage load step of resistive load 500 1000 % bypical  eload step 50 to 100% bypical  load step 50 to 100% bypical  load step 00 to 50% bypical  load	<ul> <li>on short-circuiting during the start-up typical</li> </ul>	35 A
on a short-circuiting during the start-up     old a short-circuit during operation     product feature     obtigging of equipment	<ul> <li>at short-circuit during operation typical</li> </ul>	35 A
on a short-circuiting during the start-up     old a short-circuit during operation     product feature     obtigging of equipment	duration of overloading capability for excess current	
a thick-circuit during operation product feature bridging of equipment verifications product feature bridging of equipment verifications product of paralled-switched equipment resources for increasing the power efficiency in percent power loss [W] at rated output voltage for rated value of the output current typical  Clossed-loop control relative control precision of the output voltage with rapid fluctuation of the input voltage by rk. 15% hybical relative control precision of the output voltage load step of resistive door to precision of the output voltage load step of resistive load 10/90/10% hypical load step 100 to 50% typical load step 100 to 50% typical load step 100 to 50% typical load step 90 to 10% hypical load		100 ms
product feature  • bridging of equipment • power loss [W] • at rated output voltage for rated value of the output • art rated output voltage for rated value of the output • at rated output voltage for rated value of the output • at rated output voltage for rated value of the output • at rated output voltage of rated value of the output • at rated output voltage of rated value of the output • at rated output voltage of rated value of the output • at rated output voltage of rated value of the output • at rated output voltage of rated value of the output • at rated output voltage of rated value of the output • at rated output voltage output • at rated output •		100 ms
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current typical  Closed-Loop control  relative control precision of the output voltage with rapid fluctuation of the input voltage by +-1 15% typical  relative control precision of the output voltage load step of resistive load 50/100/50 % typical  setting time  load step 50 to 100% typical  load step 50 to 100% typical  load step 100 to 50% typical  load step 100 to 50% typical  load step 100 to 90% typical  setting time  load step 10 to 90% typical  setting time  load step 90 to 10% typical  load step	power loss [W]	
Classed-loop control   relative control precision of the output voltage with rapid fluctuation of the input voltage by 4/- 15% typical     relative control precision of the output voltage load step of resistive load 50/100/50 % typical     • load step 50 to 100% typical   2 ms     • 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 of resistive load 10/90/10 % typical   2 ms     • load step 100 to 90% typical   2 ms     • load step 90 to 10% typical   2 ms     • load st	<ul> <li>at rated output voltage for rated value of the output</li> </ul>	47 W
relative control precision of the output voltage with rapid fluctuation of the input voltage by 4'- 15% typical relative control precision of the output voltage load step of resistive load 50/100/50 % typical setting time    load step 50 to 100% typical   2 ms   2 ms	current typical	
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load step 100 to 50% typical   2 ms   2 ms   3 %   3 ms	setting time	
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resistive load 10/90/10 % typical setting time  • load step 10 to 90% typical • load step 90 to 10% typical • maximum  Protection and monitoring  design of the overvoltage protection • typical property of the output short-circuit proof  design of short-circuit protection enduring short circuit current RMS value • maximum  7 A  overcurrent overload capability in normal operation  Safety galvanic isolation between input and output yes galvanic isolation between rope and output short-circuit current • maximum  Safety galvanic isolation Class I  leakage current • maximum • maximum  • maximum  • 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 • typical protection class IP  Approvals  certificate of suitability • CE marking • UL approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	load step 100 to 50% typical	2 ms
I load step 10 to 90% typical I load step 90 to 10% typical I maximum I 10 ms  Protection and monitoring  design of the overvoltage protection I typical I property of the output short-circuit proof I design of short-circuit protection I electronic shutdown, automatic restart  enduring short circuit current RMS value I maximum I A overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output I yes  galvanic isolation I enaximum I 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  I leakage current I maximum I typical I mA I protection class IP  Approvals  CE marking Ves CE marking Ves CE marking Ves CE marking Ves CL Lapproval Ve		3 %
<ul> <li>load step 90 to 10% typical</li> <li>maximum</li> <li>10 ms</li> <li>Protection and monitoring</li> <li>design of the overvoltage protection</li> <li>typical</li> <li>25.5 A</li> <li>property of the output short-circuit proof</li> <li>design of short-circuit protection</li> <li>Electronic shutdown, automatic restart</li> <li>enduring short circuit current RMS value</li> <li>maximum</li> <li>maximum</li> <li>7 A</li> <li>overcurrent overload capability in normal operation</li> <li>Safety</li> <li>galvanic isolation between input and output</li> <li>yes</li> <li>galvanic isolation</li> <li>Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16</li> <li>operating resource protection class</li> <li>Class I</li> <li>leakage current</li> <li>maximum</li> <li>typical</li> <li>maximum</li> <li>typical</li> <li>maximum</li> <li>typical</li> <li>maximum</li> <li>typical</li> <li>maximum</li> <li>typical</li> <li>protection class IP</li> <li>IP20</li> <li>Approvals</li> <li>Cet marking</li> <li>UL approval</li> <li>Yes</li> <li>CUL approval</li> <li>Yes</li> <li>CUL approval</li> <li>Yes</li> <li>CUL approval</li> <li>Yes</li> <li>CUL approval</li> <li>Yes</li> <li>CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>	setting time	
• maximum 10 ms  Protection and monitoring  design of the overvoltage protection protection against overvoltage in case of internal fault Vout < 35 V  • typical 25.5 A  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  • UL approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	<ul> <li>load step 10 to 90% typical</li> </ul>	2 ms
Protection and monitoring  design of the overvoltage protection  • typical  • typical  property of the output short-circuit proof  design of short-circuit protection  enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  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  leakage current  • maximum  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Yes  yes  yes  CLass CLass CLASS CSA C22.2 No. 107.1), File E197259; cCSAus	<ul> <li>load step 90 to 10% typical</li> </ul>	2 ms
design of the overvoltage protection  • typical  • typical  property of the output short-circuit proof  design of short-circuit protection  enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output  galvanic isolation  operating resource protection class  leakage current  • maximum  • typical  • typical  • maximum  • typical  • typical  • maximum  • typical  •	• maximum	10 ms
• typical     property of the output short-circuit proof     design of short-circuit protection     enduring short circuit current RMS value     • maximum	Protection and monitoring	
property of the output short-circuit proof design of short-circuit protection enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  Safety galvanic isolation between input and output  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  leakage current  • maximum  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Yes  Electronic shutdown, automatic restart  7 A  Overcurrent overload capability 150 % lout rated up to 5 s/min  Safety  Yes  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 I  IP20  Approvals  Class I  IP20  Approvals  CE marking  Yes  Ves; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	design of the overvoltage protection	protection against overvoltage in case of internal fault Vout < 35 V
design of short-circuit protection enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output  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  leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Flact of the suitability overload capability 150 % lout rated up to 5 s/min  Safety  Yes  Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16  Class I  IP20  Approvals  Class I  IP20  Approvals  CE marking  Yes  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	• typical	25.5 A
design of short-circuit protection enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output  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  leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Electronic shutdown, automatic restart  Flact of the suitability overload capability 150 % lout rated up to 5 s/min  Safety  Yes  Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16  Class I  IP20  Approvals  Class I  IP20  Approvals  CE marking  Yes  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	property of the output short-circuit proof	Yes
enduring short circuit current RMS value  • maximum  overcurrent overload capability in normal operation  Safety  galvanic isolation between input and output  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  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		Electronic shutdown, automatic restart
<ul> <li>maximum</li> <li>overcurrent overload capability in normal operation</li> <li>safety</li> <li>galvanic isolation between input and output</li> <li>galvanic isolation</li> <li>Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178, transformer acc. to EN 61558-2-16</li> <li>operating resource protection class</li> <li>leakage current</li> <li>maximum</li> <li>typical</li> <li>tmA</li> <li>protection class IP</li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>		,
overload capability in normal operation  Safety  galvanic isolation between input and output  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  typical  protection class IP  Approvals  certificate of suitability  CE marking  UL approval  Ves  ves (ULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	-	7 A
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galvanic isolation between input and output  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  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2
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operating resource protection class  leakage current  • maximum  • typical  protection class IP  Approvals  certificate of suitability  • CE marking  • UL approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178,
leakage current  • maximum  • typical  1 mA  protection class IP  IP20  Approvals  certificate of suitability  • CE marking  • UL approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
<ul> <li>maximum</li> <li>typical</li> <li>1 mA</li> <li>protection class IP</li> <li>IP20</li> <li>Approvals</li> <li>certificate of suitability</li> <li>CE marking</li> <li>UL approval</li> <li>Yes</li> <li>CULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>		Class I
● typical 1 mA  protection class IP IP20  Approvals  certificate of suitability  ● CE marking Yes  ● UL approval Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	-	0.5. A
protection class IP IP20  Approvals  certificate of suitability  • CE marking  • UL approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
Approvals  certificate of suitability  • CE marking  • UL approval  Yes  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus		
certificate of suitability  • CE marking  • UL approval  Yes  Yes  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	·	IP20
<ul> <li>CE marking</li> <li>UL approval</li> <li>Yes</li> <li>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus</li> </ul>	Approvals	
• UL approval  Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cCSAus	certificate of suitability	
	CE marking	Yes
,	UL approval	

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	7,55,5117 52
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	NO
standard	
for emitted interference	EN 55022 Class B
for mains harmonics limitation	EN 61000-3-2
for interference immunity	EN 61000-6-2
environmental conditions	EN 01000 0 2
ambient temperature	
during operation	-25 +60 °C; with natural convection
	-40 +85 °C
<ul><li>during transport</li><li>during storage</li></ul>	-40 +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 95% no condensation
Mechanics	Olimate class sto, 5 55 /6 fib condensation
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
e at output	stranded
at output     for a william contacts	+, -: 2 screw terminals each for 0.2 4 mm <sup>2</sup>
• for auxiliary contacts	13, 14 (alarm signal): 1 screw terminal each for 0.05 2.5 mm <sup>2</sup>
width of the enclosure	90 mm 145 mm
height of the enclosure  depth of the enclosure	145 mm
required spacing	100 (1)
	40 mm
top     bottom	40 mm
	0 mm
• left	0 mm
• right	1.6 kg
net weight	Yes
product feature of the enclosure housing can be lined up	
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)

