SIEMENS

Data sheet 6EP1536-3AA00

SITOP PSU400M/DC/DC/600V/24V/20A

SITOP PSU400M 20 A DC/DC converter input: 600 V DC output: 24 V DC/20 A

Input	
type of the power supply network	DC voltage
supply voltage at AC	
● initial value	startup from 340 V DC; derating necessary at 300 ... 400 V DC and 824 ... 900 V DC
supply voltage	
● at DC	600 ... 600 V
input voltage	
● at DC	300 ... 900 V
overvoltage overload capability	Shutdown at Vin > 900 V DC
input current	
● at DC at rated input voltage 600 V	0.85 A
current limitation of inrush current at 25 °C maximum	8 A
I2t value maximum	0.02 A²·s
fuse protection type	yes, cut-off capacity 20 kA; L/R < 2 ms ("+" and "-" input)
Output	
voltage curve at output	Controlled, isolated DC voltage
output voltage at DC rated value	24 V
output voltage	
● at output 1 at DC rated value	24 V
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	
● on slow fluctuation of input voltage	0.3 %
● on slow fluctuation of ohm loading	0.3 %
residual ripple	
● maximum	150 mV
● typical	30 mV
voltage peak	
● maximum	200 mV
● typical	100 mV
adjustable output voltage	24 ... 28.8 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer; max. 480 W
display version for normal operation	Green LED for 24 V OK, green flashing LED for start delay
type of signal at output	Relay contact (NO contact, rating 60 V DC/ 0.3 A; 30 V DC/1 A) for 24 V OK
behavior of the output voltage when switching on	No overshoot of Vout (soft start)
response delay maximum	0.1 s; 10 s adjustable using switch
voltage increase time of the output voltage	
● maximum	150 ms
output current	

● rated value	20 A
● rated range	0 ... 20 A; +60 ... +70 °C: Derating 5.5%/K
supplied active power typical	480 W
short-term overload current	
● on short-circuiting during the start-up typical	40 A
● at short-circuit during operation typical	60 A
duration of overloading capability for excess current	
● on short-circuiting during the start-up	150 ms
● at short-circuit during operation	25 ms
constant overload current	
● on short-circuiting during the start-up typical	23 A
product feature	
● bridging of equipment	Yes; switchable characteristic
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	95 %
power loss [W]	
● at rated output voltage for rated value of the output current typical	25 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	1.5 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	1.5 %
setting time	
● load step 50 to 100% typical	1 ms
● load step 100 to 50% typical	1 ms
setting time	
● maximum	5 ms
Protection and monitoring	
design of the overvoltage protection	< 33 V
● typical	22 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 22 A or latching shutdown
enduring short circuit current RMS value	
● typical	22 A
overcurrent overload capability in normal operation	overload capability 150 % Iout rated up to 5 s/min
display version for overload and short circuit	LED yellow for "overload", LED red for "latching shutdown", red LED flashing for "Overtemperature"
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Protective extra low output voltage Vout according to EN 60950-1 and EN 50178
operating resource protection class	Class I
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
● CSA approval	Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259
● 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
● C-Tick	No

● Regulatory Compliance Mark (RCM)	Yes
certificate of suitability shipbuilding approval	Yes
shipbuilding approval	DNV GL
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● French marine classification society (BV)	No
● DNV GL	Yes
● Lloyds Register of Shipping (LRS)	No
● Nippon Kaiji Kyokai (NK)	No
EMC	
standard	
● for emitted interference	EN 55022 Class A (emission)
● for mains harmonics limitation	-
● for interference immunity	EN 61000-6-2
environmental conditions	
ambient temperature	
● during operation	-25 ... +70 °C; with natural convection
● during transport	-40 ... +85 °C
● during storage	-40 ... +85 °C
environmental category according to IEC 60721	Climate class 3K3, 5 … 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
● at input	DC input, +, -, PE: 1 screw terminal each for 0.2 ... 6/4 mm² single-core/finely stranded
● at output	+, -: 2 screw terminals each for 0.2 ... 6/4 mm² single-core/finely stranded
● for auxiliary contacts	Alarm signals: 2 screw terminals for 0.14 ... 1.5 mm² single-core/finely stranded
width of the enclosure	90 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
net weight	1.2 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x7.5/15
mechanical accessories	Device identification label 20 mm × 7 mm, pale turquoise 3RT1900-1SB20
MTBF at 40 °C	622 277 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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