

SITOP PSU100M/1AC/24VDC/40A

SITOP PSU100M 40 A Stabilized power supply Input: 120/230 V AC Output: 24 V DC/40 A !!!!Phased-out product!!!! Successor: 6EP3337-8SB00-0AY0 *Ex approval no longer available*



Input	
type of the power supply network	1-phase AC
supply voltage at AC	
• initial value	Set by means of wire jumper on the device; starting from $V_{in} > 95/190 \text{ V}$
supply voltage	
• 1 at AC rated value	120 V
• 2 at AC rated value	230 V
input voltage	
• 1 at AC	85 ... 132 V
• 2 at AC	176 ... 264 V
design of input wide range input	No
overvoltage overload capability	$2.3 \times V_{in}$ rated, 1.3 ms
operating condition of the mains buffering	at $V_{in} = 230 \text{ V}$
buffering time for rated value of the output current in the event of power failure minimum	20 ms
operating condition of the mains buffering	at $V_{in} = 230 \text{ V}$
line frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
line frequency	47 ... 63 Hz
input current	
• at rated input voltage 120 V	15 A
• at rated input voltage 230 V	8 A
current limitation of inrush current at 25 °C maximum	125 A
I ² t value maximum	26 A ² ·s
fuse protection type	Yes
• in the feeder	Recommended miniature circuit breaker at 1-phase operation: 20 A characteristic C; required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2421-4BA10 (120 V) or 3RV2411-1JA10 (230 V)
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	0.1 %
• on slow fluctuation of ohm loading	0.1 %
residual ripple	
• maximum	100 mV

<ul style="list-style-type: none"> • typical 	60 mV
voltage peak	
<ul style="list-style-type: none"> • maximum • typical 	200 mV 120 mV
adjustable output voltage	24 ... 28.8 V
product function output voltage adjustable	Yes
type of output voltage setting	via potentiometer
display version for normal operation	Green LED for 24 V OK
type of signal at output	via signaling module (6EP1961-3BA10)
behavior of the output voltage when switching on	Overshoot of Vout approx. 3 %
response delay maximum	0.1 s
voltage increase time of the output voltage	
<ul style="list-style-type: none"> • typical 	50 ms
output current	
<ul style="list-style-type: none"> • rated value • rated range 	40 A 0 ... 40 A; +60 ... +70 °C: Derating 2.5%/K
supplied active power typical	960 W
short-term overload current	
<ul style="list-style-type: none"> • at short-circuit during operation typical 	120 A
duration of overloading capability for excess current	
<ul style="list-style-type: none"> • at short-circuit during operation 	25 ms
constant overload current	
<ul style="list-style-type: none"> • on short-circuiting during the start-up typical 	46 A
product feature	
<ul style="list-style-type: none"> • bridging of equipment 	Yes; switchable characteristic
number of parallel-switched equipment resources for increasing the power	2
Efficiency	
efficiency in percent	88 %
power loss [W]	
<ul style="list-style-type: none"> • at rated output voltage for rated value of the output current typical 	131 W
Closed-loop control	
relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical	1 %
relative control precision of the output voltage load step of resistive load 50/100/50 % typical	2 %
setting time	
<ul style="list-style-type: none"> • load step 50 to 100% typical • load step 100 to 50% typical 	2 ms 2 ms
setting time	
<ul style="list-style-type: none"> • maximum 	5 ms
Protection and monitoring	
design of the overvoltage protection	< 35 V
<ul style="list-style-type: none"> • typical 	46 A
property of the output short-circuit proof	Yes
design of short-circuit protection	Alternatively, constant current characteristic approx. 46 A or latching shutdown
enduring short circuit current RMS value	
<ul style="list-style-type: none"> • typical 	46 A
display version for overload and short circuit	LED yellow for "overload", LED red for "latching shutdown"
Safety	
galvanic isolation between input and output	Yes
galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> • maximum • typical 	3.5 mA 0.4 mA
protection class IP	IP20
Approvals	
certificate of suitability	
<ul style="list-style-type: none"> • CE marking • UL approval 	Yes Yes: cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259

<ul style="list-style-type: none"> • CSA approval • cCSAus, Class 1, Division 2 • ATEX 	<p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>No</p> <p>No</p>
<p>certificate of suitability</p> <ul style="list-style-type: none"> • IECEx • NEC Class 2 • ULhazloc approval • FM registration 	<p>No</p> <p>No</p> <p>No</p> <p>No</p>
<p>type of certification CB-certificate</p>	<p>No</p>
<p>certificate of suitability</p> <ul style="list-style-type: none"> • EAC approval 	<p>Yes</p>
<p>certificate of suitability shipbuilding approval</p>	<p>No</p>
<p>shipbuilding approval</p>	<p>-</p>
<p>Marine classification association</p> <ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • DNV GL • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
<p>EMC</p>	
<p>standard</p> <ul style="list-style-type: none"> • for emitted interference • for mains harmonics limitation • for interference immunity 	<p>EN 55022 Class B</p> <p>-</p> <p>EN 61000-6-2</p>
<p>environmental conditions</p>	
<p>ambient temperature</p> <ul style="list-style-type: none"> • during operation • during transport • during storage 	<p>0 ... 70 °C; with natural convection</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
<p>environmental category according to IEC 60721</p>	<p>Climate class 3K3, 5 ... 95% no condensation</p>
<p>Mechanics</p>	
<p>type of electrical connection</p> <ul style="list-style-type: none"> • at input • at output • for auxiliary contacts 	<p>screw-type terminals</p> <p>L, N, PE: 1 screw terminal each for 0.2 ... 4 mm² single-core/finely stranded</p> <p>+, -: 2 screw terminals each for 0.5 ... 10 mm²</p> <p>-</p>
<p>width of the enclosure</p>	<p>240 mm</p>
<p>height of the enclosure</p>	<p>125 mm</p>
<p>depth of the enclosure</p>	<p>125 mm</p>
<p>required spacing</p> <ul style="list-style-type: none"> • top • bottom • left • right 	<p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p>
<p>net weight</p>	<p>2.9 kg</p>
<p>product feature of the enclosure housing can be lined up</p>	<p>Yes</p>
<p>fastening method</p>	<p>Snaps onto DIN rail EN 60715 35x15</p>
<p>electrical accessories</p>	<p>Buffer module, signaling module</p>
<p>MTBF at 40 °C</p>	<p>540 249 h</p>
<p>other information</p>	<p>Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)</p>

