

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	Set by means of wire jumper on the device; starting from $V_{in} > 95/190$ V
<ul style="list-style-type: none"> initial value 	
supply voltage	120 V 230 V
<ul style="list-style-type: none"> 1 at AC rated value 2 at AC rated value 	
input voltage	85 ... 132 V 176 ... 264 V
<ul style="list-style-type: none"> 1 at AC 2 at AC 	
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 $V_{in} = 230$ 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 $V_{in} = 230$ V
line frequency	50 Hz 60 Hz
<ul style="list-style-type: none"> 1 rated value 2 rated value 	
line frequency	47 ... 63 Hz
input current	15 A 8 A
<ul style="list-style-type: none"> at rated input voltage 120 V at rated input voltage 230 V 	
current limitation of inrush current at 25 °C maximum	125 A
I ² t value maximum	26 A ² ·s
fuse protection type	Yes
<ul style="list-style-type: none"> 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	24 V
<ul style="list-style-type: none"> at output 1 at DC rated value 	
relative overall tolerance of the voltage	3 %
relative control precision of the output voltage	0.1 %
<ul style="list-style-type: none"> on slow fluctuation of input voltage on slow fluctuation of ohm loading 	
residual ripple	0.1 %

<ul style="list-style-type: none"> • maximum 	100 mV
<ul style="list-style-type: none"> • typical 	60 mV
voltage peak	
<ul style="list-style-type: none"> • maximum 	200 mV
<ul style="list-style-type: none"> • typical 	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 V_{out} 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 	40 A
<ul style="list-style-type: none"> • rated range 	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 	2 ms
<ul style="list-style-type: none"> • load step 100 to 50% typical 	2 ms
setting time	
<ul style="list-style-type: none"> • maximum 	5 ms
Protection and monitoring	
design of the overvoltage protection	< 35 V
response value current limitation 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 U_{out} acc. to EN 60950-1 and EN 50178
operating resource protection class	Class I
leakage current	
<ul style="list-style-type: none"> • maximum 	3.5 mA
<ul style="list-style-type: none"> • typical 	0.4 mA
protection class IP	IP20
Approvals	

certificate of suitability	
<ul style="list-style-type: none"> • CE marking • UL approval • CSA approval • cCSAus, Class 1, Division 2 • ATEX 	<p>Yes</p> <p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>Yes; cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259</p> <p>No</p> <p>No</p>
certificate of suitability	
<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>
type of certification CB-certificate	No
certificate of suitability	
<ul style="list-style-type: none"> • EAC approval 	Yes
certificate of suitability shipbuilding approval	No
shipbuilding approval	-
Marine classification association	
<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>
EMC	
standard	
<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>
environmental conditions	
ambient temperature	
<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>
environmental category according to IEC 60721	Climate class 3K3, 5 ... 95% no condensation
Mechanics	
type of electrical connection	screw-type terminals
<ul style="list-style-type: none"> • at input • at output • for auxiliary contacts 	<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>
width of the enclosure	240 mm
height of the enclosure	125 mm
depth of the enclosure	125 mm
required spacing	
<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>
net weight	2.9 kg
product feature of the enclosure housing can be lined up	Yes
fastening method	Snaps onto DIN rail EN 60715 35x15
electrical accessories	Buffer module, signaling module
MTBF at 40 °C	540 249 h
other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

