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Data sheet 6EP1333-3BA10

SITOP PSU200M 24 V/5 A
SITOP PSU200M 5 A Stabilized power supply input: 120/230-500 V AC output: 24 V DC/5 A

Input	
Input	1-phase and 2-phase AC
• Note	Set by means of selector switch on the device; starting from Vin > 90/180 V
Supply voltage	
• 1 at AC	120 ... 230 V
• 2 at AC	230 ... 500 V
Input voltage	
• 1 at AC	85 ... 264 V
• 2 at AC	176 ... 550 V
Wide-range input	Yes
Overvoltage resistance	1300 Vpeak, 1.3 ms
Mains buffering	at Vin = 120/230 V, typ. 150 ms at Vin = 400 V
Mains buffering at Iout rated, min.	25 ms; at Vin = 120/230 V, typ. 150 ms at Vin = 400 V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
Input current	
• at rated input voltage 120 V	2.2 A

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• at rated input voltage 230 V	1.2 A
• at rated input voltage 500 V	0.61 A
Switch-on current limiting (+25 °C), max.	35 A
I^2t, max.	1.7 $A^2 \cdot s$
Built-in incoming fuse	T 3.15 A (not accessible)
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker at 1-phase operation: from 6 A (10 A) characteristic C (B); required at 2-phase operation: circuit breaker 2-pole connected or circuit breaker 3RV2011-1EA10 (setting 3.8 A) or 3RV2711-1ED10 (UL 489) at 230 V; 3RV2011-1DA10 (setting 3 A) or 3RV2711-1DD10 (UL 489) at 400/500 V

Output	
Output	Controlled, isolated DC voltage
Rated voltage Vout DC	24 V
Total tolerance, static ±	3 %
Static mains compensation, approx.	0.1 %
Static load balancing, approx.	0.1 %
Residual ripple peak-peak, max.	50 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	200 mV
Adjustment range	24 ... 28.8 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 24 V OK
Signaling	Relay contact (NO contact, rating 60 V DC/ 0.3 A) for "24 V OK"
On/off behavior	Overshoot of Vout approx. 3 %
Startup delay, max.	1 s
Voltage rise, typ.	50 ms
Rated current value Iout rated	5 A
Current range	0 ... 5 A
Supplied active power typical	120 W
Short-term overload current	
• at short-circuit during operation typical	15 A
Duration of overloading capability for excess current	
• at short-circuit during operation	25 ms
Constant overload current	
• on short-circuiting during the start-up typical	6 A
Parallel switching for enhanced performance	Yes; switchable characteristic
Numbers of parallel switchable units for enhanced performance	2

Efficiency	
Efficiency at Vout rated, Iout rated, approx.	88 %
Power loss at Vout rated, Iout rated, approx.	17 W
Power loss [W] during no-load operation maximum	4 W

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Closed-loop control	
Dynamic mains compensation (Vin rated ±15 %), max.	0.1 %
Dynamic load smoothing (Iout: 50/100/50 %), Uout ± typ.	3 %
Load step setting time 50 to 100%, typ.	2 ms
Load step setting time 100 to 50%, typ.	2 ms
Setting time maximum	5 ms

Protection and monitoring	
Output overvoltage protection	< 35 V
Current limitation, typ.	6 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Alternatively, constant current characteristic approx. 5.5 A or latching shutdown
Enduring short circuit current RMS value	
• typical	6 A
Overload/short-circuit indicator	LED yellow for "overload", LED red for "latching shutdown"

Safety	
Primary/secondary isolation	Yes
Galvanic isolation	Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178
Protection class	Class I
Leakage current	
• maximum	3.5 mA
• typical	0.25 mA
Degree of protection (EN 60529)	IP20

Approvals	
CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259, cCSAus (CSA C22.2 No. 60950-1, UL 60950-1)
Explosion protection	IECEx Ex nA nC IIC T4 Gc; ATEX (EX) II 3G Ex nA nC IIC T4 Gc; cCSAus (CSA C22.2 No. 213, ANSI/ISA-12.12.01) Class I, Div. 2, Group ABCD, T3
FM approval	-
CB approval	Yes
Marine approval	ABS, DNV GL

EMC	
Emitted interference	EN 55022 Class B
Supply harmonics limitation	EN 61000-3-2
Noise immunity	EN 61000-6-2

environmental conditions	
Ambient temperature	

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• during operation	-25 ... +70 °C
— Note	With natural convection; startup tested starting from -40 °C nominal voltage
• during transport	-40 ... +85 °C
• during storage	-40 ... +85 °C
Humidity class according to EN 60721	Climate class 3K3, 5 … 95% no condensation

Mechanics	
Connection technology	screw-type terminals
Connections	
• Supply input	L, N, PE: 1 screw terminal each for 0.2 ... 2.5 mm² single-core/finely stranded
• Output	+, -: 2 screw terminals each for 0.2 ... 2.5 mm²
• Auxiliary	13, 14 (alarm signal): 1 screw terminal each for 0.14 ... 1.5 mm²
Width of the enclosure	70 mm
Height of the enclosure	125 mm
Depth of the enclosure	121 mm
Required spacing	
• top	50 mm
• bottom	50 mm
• left	0 mm
• right	0 mm
Weight, approx.	0.6 kg
Product feature of the enclosure housing for side-by-side mounting	Yes
Installation	Snaps onto DIN rail EN 60715 35x7.5/15
Electrical accessories	Buffer module
MTBF at 40 °C	1 123 973 h
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)

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